Vol. X. (WHOLE No. 39.) No. 3.

The Architectural Record

January, 1901.

25c

CONTENTS

25c

WINDOWS OF GOUDA, ... 225
Caryl Coleman.

WHERE OUR ARCHITECTS WORK. No. 3—ERNEST FLAGG'S WORKSHOP, 238

MODERN FRENCH FURNITURE AT THE PARIS EXPOSITION, ... 245

AMERICAN ARTISTS AND THEIR PUBLIC, ... 256
Herbert Croly

SOME RECENT AMERICAN ARCHITECTURE, ... 263

THE TOWN AND CASTLE OF ANNECY —ILLUSTRATIONES, ... 270

THE NEW CAPITOL IN ST. PAUL. . 281

LEADING FRENCH ARCHITECTS—M. J. A. BOUVARD, ... 290
René de Cuers.

ARCHITECTURAL SCHOOLS IN THE UNITED STATES—UNIVERSITY OF PENNSYLVANIA,. 313
Percy C. Stuart.

100 ILLUSTRATIONS.

ARCHITECTURE AND THE ALLIED ARTS.

Copyright, 1901, by THE ARCHITECTURAL RECORD CO., 14-16 Vesey St., N. Y. City.
NEW YORK AND BOSTON.

ADVERTISERS' DIRECTORY.

Business.	Name.	Page.
Artists' Materials,	Joseph Dixon Crucible Co.,	17
	Chas. M. Higgins & Co.,	39
Boilers,	Westinghouse Machine Co.,	4
Brass and Bronze Workers,	Jno. Williams,	20
	Yale & Towne Mfg. Co.,	12
	Russell & Erwin Mfg. Co.,	16
	P. & F. Corbin,	14
	Reading Hardware Co.,	18
Brick,	Sayre & Fisher Co.,	27
Builders,	Chas. T. Wills,	1
	D. C. Weeks & Son,	Second Cover
	Thompson-Starrett Co.,	13
Builders' Hardware	Yale & Towne Mfg. Co.,	12
	Russell & Erwin Mfg. Co.,	16
	P. & F. Corbin,	14
	Reading Hardware Co.,	18
Cement,	Atlas Portland Cement Co.,	15
	Lawrence Cement Co.,	40
	New York and Rosendale Cement Co.,	30
	Sears, Humbert & Co.,	25
Coverings for Pipes and Boilers,	Robert A. Keasbey,	38
Cut Stone Contractors	B. A. & G. N. Williams,	21
	George Brown & Co.,	23
Decorations,	Tiffany Glass and Decorating Co.,	28
	W. & J. Sloane,	7
	Chas. R. Yandell & Co.,	39
Drawing Inks,	Chas. M. Higgins & Co.,	39
Electric and Gas Fixtures	The Mitchell Vance Co.,	39
Electrical Equipment,	Harry Alexander,	26
Elevators,	Otis Elevator Co.,	3
Engineers and Contractors,	Westinghouse, Church, Kerr & Co.,	4
	Cooper & Wigand	Back Cover
Engines,	Westinghouse Machine Co.,	4
	Westinghouse Electric & Mfg. Co.,	4
Fireplaces,	Bradley & Currier Co.,	37
Fireproofing,	The Roebling Construction Co.,	8
Furnaces and Ranges,	Richardson & Boynton Co.,	2
	The Thatcher Furnace Co.,	38
General Contractors,	Charles T. Wills	1
	D. C. Weeks & Son,	Second Cover
	Thompson-Starrett Co.,	13
Granite and Stone,	George Brown & Co.,	23
	B. A. & G. N. Williams,	21
	Geo. W. White & Co.,	32
Horticultural Builders,	Hitchings & Co.,	34
	Lord & Burnham Co.,	36

ADVERTISERS' DIRECTORY.—*Continued.*

BUSINESS.	NAME.	PAGE.
IRON AND METAL WORKERS,	The American Bridge Company,	Third Cover
	Jno. Williams,	20
	Cooper & Wigand	Back Cover
	Yale & Towne Mfg. Co.,	12
	Russell & Erwin Mfg. Co.,	16
	P. & F. Corbin,	14
	Reading Hardware Co.,	18
LAUNDRY MACHINERY,	Troy Laundry Machinery Co., Ltd.,	36
LEAD PENCILS,	Joseph Dixon Crucible Co.,	17
LOCKS,	Yale & Towne Mfg. Co.,	12
	Russell & Erwin Mfg. Co.,	16
	P. & F. Corbin	14
	Reading Hardware Co.,	18
MAHOGANY AND CEDAR,	Wm. E. Uptegrove & Bro.,	33
MAIL CHUTES,	Cutler Mfg. Co ,	5
MANTELS,	Bradley & Currier Co.,	37
MARBLE WORKERS,	Batterson & Eisele,	24
	Rob't C. Fisher & Co.,	22
	John H. Shipway & Bro.,	31
MOSAIC WORKERS,	Batterson & Eisele,	24
	Rob't C. Fisher & Co.,	22
PARQUET FLOORS,	G. W. Koch & Son,	19
PROTECTIVE PAINTS,	Joseph Dixon Crucible Co.,	17
PUBLICATIONS,	Principles of Architectural Composition,	35
REFRIGERATORS,	Lorillard Refrigerator Co.,	6
SANITARY SPECIALTIES,	J. L. Mott Iron Works,	29
SHINGLE STAINS,	Dexter Bros.,	38
	Samuel Cabot	37
STAINED GLASS AND MOSAICS,	Tiffany Glass and Decorating Co.,	28
STEAM AND HOT WATER HEATERS,	Westinghouse, Church, Kerr & Co.,	4
	Richardson & Boynton Co.,	2
	Hitchings & Co.,	34
	Thatcher Furnace Co.,	38
STONE,	Geo. W. White & Co.,	32
	George Brown & Co.,	23
	B. A. & G. N. Williams,	21
TILING,	Bradley & Currier Co.,	37

DESIGN—ANTWERP.
CUT ½ SIZE.

The products of THE YALE & TOWNE MANUFACTURING COMPANY, comprising

The Yale Locks,

Builders' Hardware,

Art Metal Work,

Blount Checks, etc.

can be obtained from the Hardware Trade throughout the country. All the larger houses can show its large Trade Catalogue No. 17, and many of them can exhibit the goods in their show-rooms.

Complete collections can be seen in the Exhibit Rooms maintained by the Company in its General and Branch Offices.

Special brochures, of technical interest, furnished to Architects on request.

The Yale & Towne Mfg. Co.

GENERAL OFFICES:

9, 11 and 13 Murray Street,

New York City.

The
Architectural Record.

VOL. X. JANUARY, 1901. No. 3.

THE WINDOWS OF GOUDA.

A Perversion of an Art.

IT is a mistake to suppose that the architects and artists of the Renaissance confined their efforts exclusively to the resuscitation of Greek and Roman art and art methods, for in truth, they also attempted to mould mediaeval art into classic forms, to arrest it in its true development, and to force it into lines foreign to its genius.

The result of their misplaced endeavor is most forcibly exemplified in their treatment of the art of making a colored glass window—a pure child of Gothic motives, the architectural expression in color of mediaeval culture—until the birth of Cinque Cento art in complete harmony with the styles of architect with which it was associated. They so warped and perverted the art from its legitimate reason of being, its essential and traditional characteristics, that they at last brought it to naught, and it rested in its grave of nothingness, until it was recreated by the Gothic revivalists.

Nevertheless, during the Renaissance there were a number of colored glass windows made which will always command the student's attention, because of the wonderful skill displayed by the artist in producing transparent pictures, of more or less beauty, with a material which was inherently antagonistic to their method of work, and alien to their aesthetic inclinations.

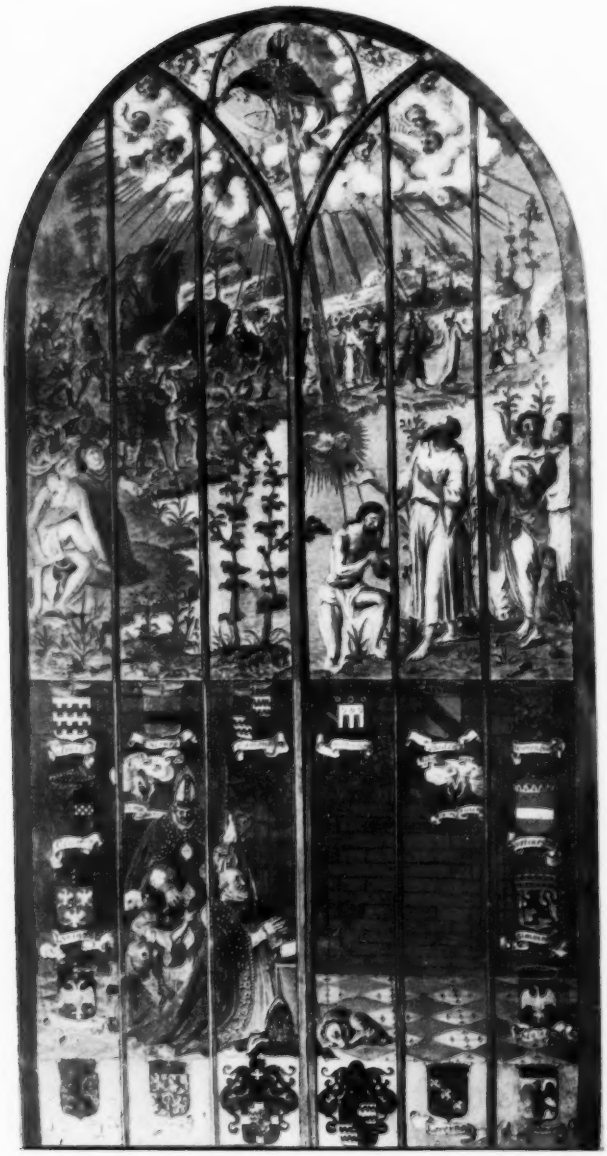
If the office of colored glass as an architectural accessory is purely decorative, polychromatically decorative, as it was regarded in the middle ages in its best period; if, as is held by modern critics, it is most effective as a decorative color note only when it is treated as a transparent mosaic, and if its greatest decorative value is always marred by varying surfaces in the composition or design, as a comparative study demonstrates, then all the colored windows built on Renaissance lines are lamentable failures—perversions of the glazier's art.

Copyright, 1901, by "The Architectural Record Company." All rights reserved.
Vol. X.—No. 3.—Sig. 1.

If they have any artistic value? And it cannot be denied that they have. They must, in order to be appreciated, be dissociated from their architectural surroundings, and looked upon simply as transparent pictures; then it will be discovered, although weak in color, that they are very often masterful in composition, life-like in portraiture, and wonderful in linear perspective.

These values are vividly present in the windows of the parish church of Saint John the Baptist at Gouda, in Holland, twelve miles from Rotterdam, works of the later Renaissance, designed and painted between the years 1555 and 1602, by the brothers Theodoric and Walter Crabeth, and their pupils. The original church of Saint John was burnt down in 1375, rebuilt in 1458, struck by lightning and burnt again to the ground on the night of the 12th of January, 1552. It was almost immediately rebuilt, but the new structure far surpassed in size not only the former edifice, but also all other churches in Holland and the Netherlands. When the windows were needed for the new church, many eminent persons were eager to take a hand in supplying them: Philip the Second of Spain, the Duchess of Parma, the Prince of Orange, and many Lords, both temporal and spiritual. These donations not only mark the state of the glass painters' art, during the last half of the 16th century, but also the political and religious history of the country.

The town of Gouda was fortunate in having among its citizens two such skillful designers and glass painters as the Crabeth brothers, to whom could be entrusted the execution of the windows with every hope of getting in return works of art. These artists were men of humble origin, the sons of a market sweeper, and received their first instruction in glass painting from the hands of a monk living at Gouda. Afterwards they entered the ateliers of their fellow townsmen, Caddesteign and Ponsen, men of "high



BAPTISM OF CHRIST.
Designed and Painted by Theodoric Crabeth, 1555.

CONSECRATION OF SOLOMON'S TEMPLE (UPPER PART).
Designed and Painted by Theodoric Crabeth, 1557.

CONSECRATION OF SOLOMON'S TEMPLE (LOWER PART).
Designed and Painted by Theodoric Crabeth, 1557.

repute for their works in glass," and it is said that Theodoric, better known as Dirk, also studied for a time with the well-known Cornelis Ketel. Subsequently both brothers migrated to Paris, where they pursued their studies under the then greatest master of the art: Jean Cousin, the designer and painter of the celebrated windows in the chapel of the Chateau de Vincennes. Walter supplemented his studies at Paris by a journey into Italy, the good effect of which is plainly to be seen in his work. The brothers, although trained by the same masters, and working side by side, varied somewhat in their respective methods of work, one in "heightening and diversifying his light tones, the other in elaborating his shadows." They held, however, to the same theory of composition and usually divided their windows so as to introduce two subjects: in the upper division they placed the principal one, a religious, historical or allegorical theme; in the lower they represented the donor of the window or his heraldic arms or insignia of office; and in all cases they carried their subjects or pictures across the windows irrespective of the mullions; sometimes giving them an architectural background, sometimes a landscape, or a union of both; elaborating and massing their color in the picture itself, slighting the architectural framework and ornaments, and employing almost invariably large pieces of glass.

A critic of great perspicuity, speaking of the windows of Gouda, said with truth: "As glass paintings they possess various degrees of merit, but all sadly want brilliancy and transparency. Some, and these not always the latest ones, are also very defective in richness of color, arising from a substitution of enamel colors for colored glass. A brown enamel ground dabbed on, and possessing no decided grain, is used for the shadow in half-tint, and is generally not sufficiently removed from the lights. In some instances the bright lights are subdued with a thin coat of enamel paint. The darker shadows are formed sometimes of coarse stipple shading, heightened with smear hatching, but was more commonly of smear hatching only."

The first window executed for Saint John's church was the work of Dirk Crabeth, who designed and painted it in the year 1555. The subject of the upper part is the Baptism of Christ, of the lower a representation of the donor in a kneeling posture, the Right Rev. George D'Egmont, Lord Bishop of Utrecht and Abbot of S. Amand. Behind him stands his patron, S. Martin, giving alms to a leper. On the right and left of the Bishop there are two hands appearing from clouds accompanied with labels bearing the words: "Aperts tu manum, eterce pietatem." In addition to the figures various family and municipal coats of arms are portrayed. The figure of God the Father, as shown in the illustration, is no longer

QUEEN OF SHEBA.
Designed and Painted by Walter Crabeth, 1561.

in the window; it was taken out and placed in the sacristy of the church in 1621. This window is far better in color than most of the others. In 1556, Dirk painted two windows for the church, viz., the Sermon on the Mount, the gift of Cornelius van Mycrop, Provost and Archdeacon of Utrecht; and "Art thou he that should come? or do we look for another?" the gift of Gerard Heye Gerardson and Margaret Hendricks, his wife, and Frederick Ariensz and his daughter, whose portraits are at the foot of the window. The following year he completed two windows, one of them, the Consecration of Solomon's Temple, contained over eight hundred square feet of glass. It was given to the church by Philip of Spain and Mary of England. The length is subdivided into three parts. In the upper one the Consecration of the Temple is represented; in the next the Last Supper, in which the king and queen are introduced, kneeling on cushions; the lower part is given up to the arms of Philip and Mary, the inscription, and the like—all so designed as to form a base for the pictures above. White glass and yellow-stained are freely used throughout the window; there is very little color anywhere, except in the dress of the people. Four years passed before another window was placed in the church. Then, in 1561, there were two erected: Christ among the Doctors, and the Queen of Sheba. The first was designed by Dirk Crabeth in conjunction with Van Noord and painted by Van Zijl; the second was the work of Walter Crabeth, and the gift of the Lady Abbess of Rynsburg, Gabriele Van Boetzlaar, whose image, together with that of her name saint, is painted in the lower section of the composition.

Two more windows were finished in 1562, viz., the Birth of S. John the Baptist, designed by Dirk Crabeth and Van Noord, and painted by Van Zijl, and Elijah's Offering by Walter Crabeth. The latter was an enormous window, the same size as his brother's Consecration of the Temple, and he was paid very poorly for it, fifty-two cents per foot, although the window was the gift of an important person, as the inscription relates, "The Lady Margaret of Austria, daughter of the Emperor Charles the Fifth, Duchess of Parma, Placentia and Castro, and for the most potent Catholic King of Spain, Philip, her brother, Regent and Governor of the Low Countries, of a Christian piety, and an exact observer of divine worship, gave the glass for the ornamentation of this church." At the foot of the window there is a portrait of the most noble, if not the most generous, Duchess. Behind her stands Saint Margaret, her patroness, with a dragon under her feet.

In 1564, Walter Crabeth painted the Nativity window for the College of Saint Salvador at Utrecht; in 1566 the Sacrilege of Holiodorus for the Duke of Brunswick; and in 1567 Dirk painted for

CHRIST DRIVING THE MONEY CHANGERS FROM THE TEMPLE.
Designed and Painted by Theodoric Crabeth, 1567.

LIBERTY OF CONSCIENCE.
Designed by Uytewal and Painted by Vrije.

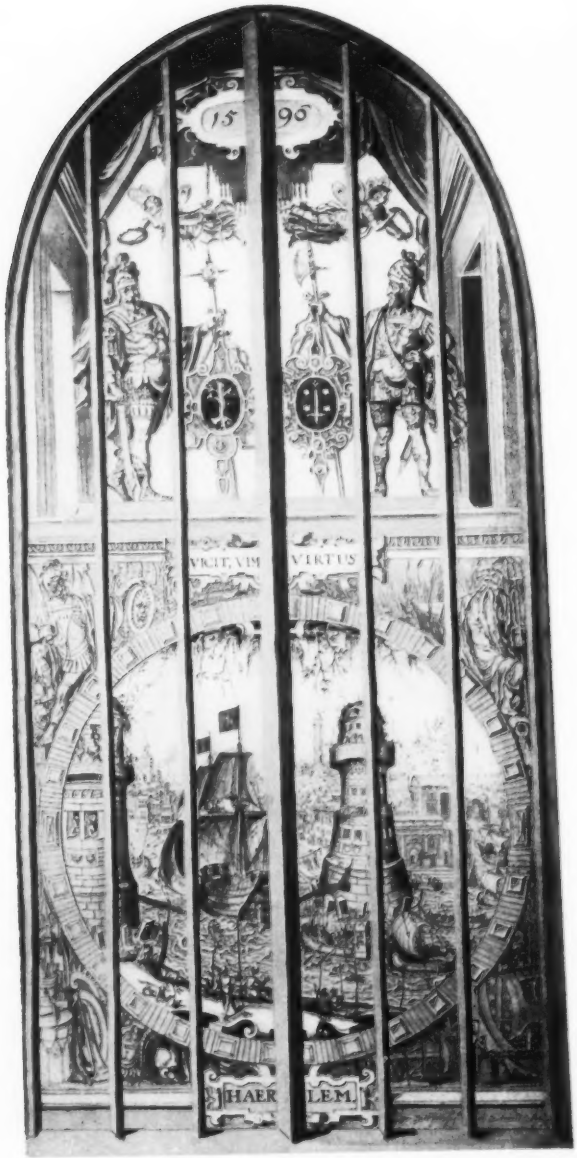
William, Prince of Orange, Christ Driving the Money Changers from the Temple, a most remarkable window, an attempt to make glass do duty for canvas by ignoring all its decorative value and using it only as a surface upon which to paint the picture. The picture itself does violence to every law that governs the true art of glass painting, more particularly in the absence of color, the opacity of the shadows, and the presence of a perspective which would be legitimate in scenic painting, but is here entirely out of place. Ninety years after the completion of the window the Councillors of Gouda caused it to be made larger, and employed Daniel Tomburgh to do the work, who introduced into the new part the arms of these worthies, twenty-eight in number.

This same artist, two years before, painted a window for S. John's, The Annunciation, which took the place of one designed by Van Noord, the master of Rubens, painted by Van Zijl in 1559, and demolished in 1655 by a tempest of great fury. If the windows already described are perversions of the glazier's art, this work of Tomburgh is the very acme of perversion.

Dirk Crabeth painted his last windows for the Gouda church in 1571, viz., Judith and Holferness, ordered by John of Baden and Katharine, Countess Mark, his wife; Balaam and his Ass, the gift of the Butchers of Gouda; and Jonah issuing from the whale, donated by the Fishmongers' Guild. These two last are so far inferior to his other windows that they well may be the work of some one of his pupils.

Most of the remaining windows in the church, except those in the clerestory of the choir, which are believed to be the work of the scholars of the Crabeth brothers, were erected after William, Prince of Orange, and the Protestant party came into power, and are largely of a political and historical nature. The subjects of the two most noted ones are Liberty of Conscience, designed by Uytewal of Utrecht, and painted by Adrian de Vrije, and the Taking of the City of Damietta, the work of William Tibaut. The first was the gift of the States of Holland, and the second of the Burgomasters of Haarlem. Liberty of Conscience is represented by a badly drawn naked woman, seated in a chariot at the side of another woman, the personification of Faith; beneath the chariot there is a prostrate figure of Tyranny; and the chariot itself is drawn by the five virtues: Charity, Justice, Concord, Fidelity and Constancy, which are portrayed under the form of women.

Louis F. Day, in writing of the window painted by Tibaut, says: "The great sea-scape at Gouda, representing the taking of Damietta in Egypt (a very Dutch Damietta), is nearly all in grisaille, against quarries of clear white, with only a little stain in the flags and costumes, and one single touch of ruby (about two inches



TAKING OF DAMIETTA.
By William Tibaut.

square), which looks as if it might be modern. The port in perspective, the ships, the whole scene in fact, is realistically rendered, and comes as near to success as is possible in glass.

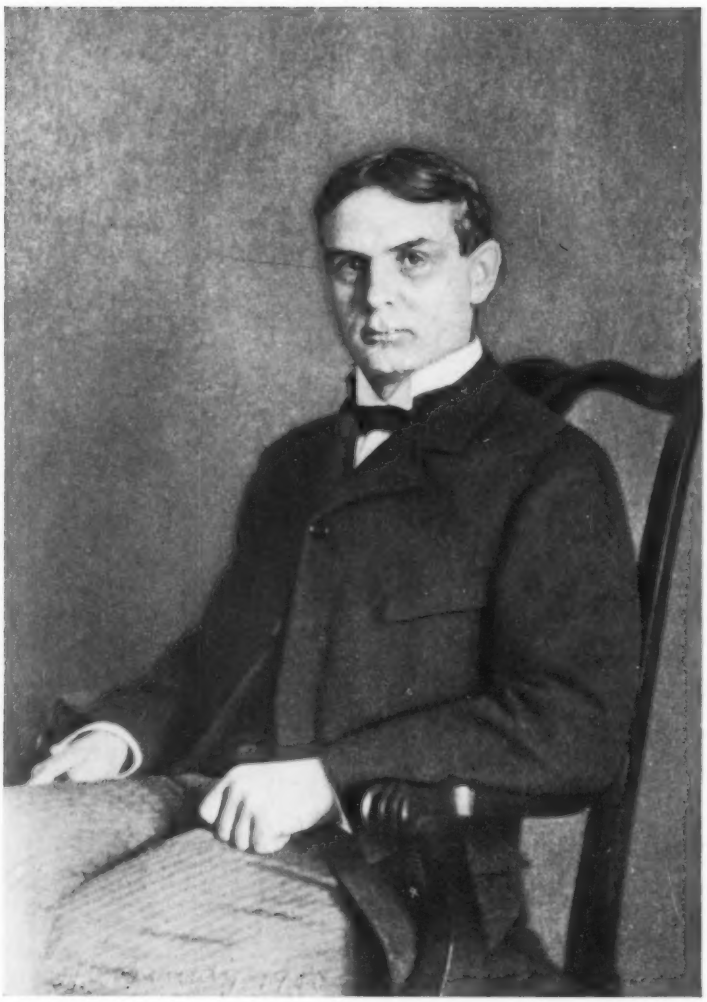
The foregoing and the accompanying illustrations make clear that the windows in the church at Gouda are clever examples of the work of clever men; men who were in possession of some of the methods of work of their great predecessors in the art—the artists of the Middle Ages—but who attempted, against their better knowledge and traditions, to employ their art in a way not adapted to its materials. Hence their windows at best are perversions of a noble art, an abuse of a good polychromatic decorative material—a material that has no second when rightly used in conjunction with legitimate architective demands.

In the Gouda windows form is paramount, color has little or no value, except to emphasize the forms; architectural surroundings are sacrified to pictorial effects; or, in other words, the artists have ignored the true principles of work, viz., the calling forth of all the color possibilities of the glass, in union with such forms as will best display the color, all in harmony with the decorative requirements and never in opposition to architectonic laws.

Is there not a lesson to be gained from these windows? Yes. A lesson of great moment to American artists in colored glass. Not that they are making the same chief mistake, but they are committing the opposite blunder, viz., in not giving form its rightful place, almost forgetting its existence, making color paramount to each and every consideration, forgetting that their art is a handmaiden of another art, an accessory of architecture, a decorative element in a general scheme of specified forms and colors harmonized to a common end.

It is almost an axiom that the abuse of a handicraft or art, together with the wrong use of the materials belonging to it, brings its own punishment. If the abuse is committed by clever men it results in a perversion; if by men of mediocre ability the outcome is the death of the art.

Caryl Coleman.



ERNEST FLAGG.

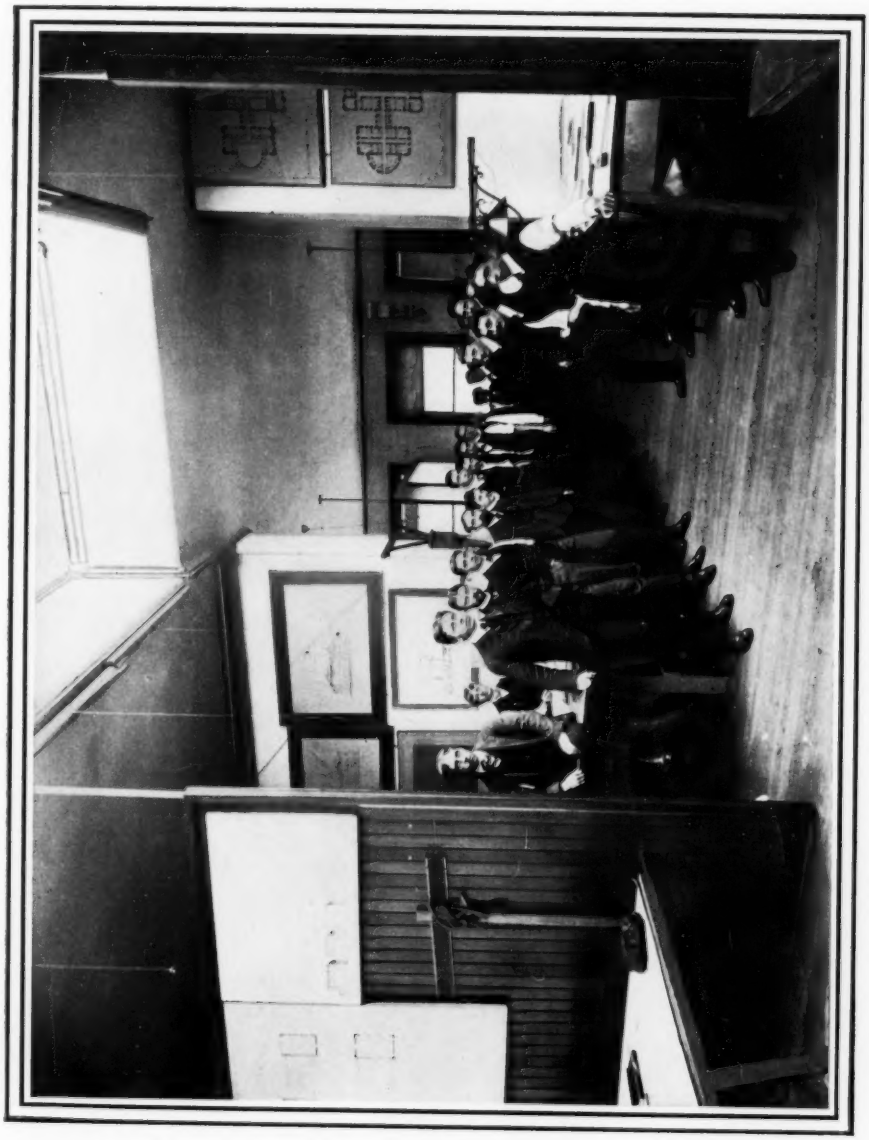
Ernest Flagg's
...Workshop

Where Our Architects Work

No. 3

No. 35 Wall St.
New York City

ALCOVES IN THE MAIN DRAUGHTING ROOM—OFFICE OF ERNEST FLAGG.



A GROUP OF THE DRAUGHTING FORCE—OFFICE OF ERNEST FLAGG.

THE LIBRARY—OFFICE OF ERNEST FLAGG.

ANOTHER VIEW OF THE LIBRARY—OFFICE OF ERNEST FLAGG.

FRONT OFFICE AND SPECIFICATION ROOM—OFFICE OF ERNEST FLAGG.

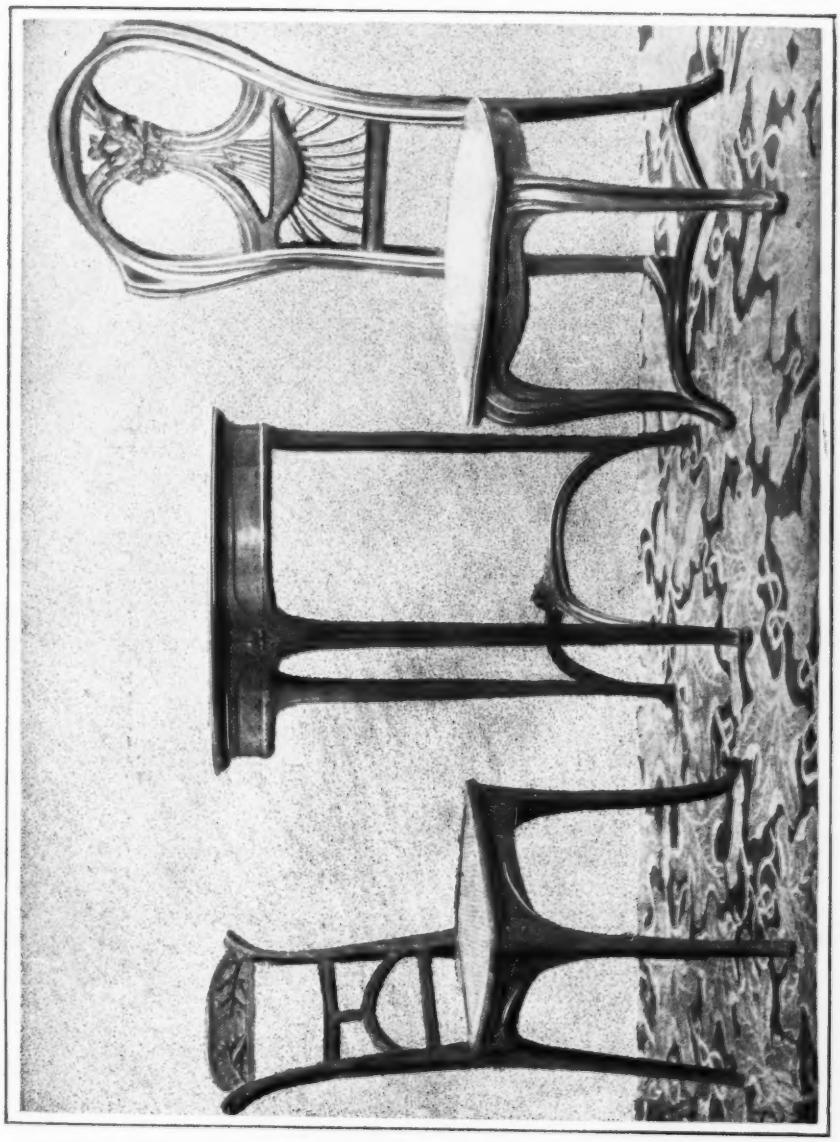
SOME EXAMPLES OF MODERN FRENCH FURNITURE.

DURING recent years French artists have been pretty consciously occupied with an endeavor to modernize their work —to introduce new motives and new forms into painting, sculpture, architecture and household decoration. It can hardly be said that the movement has been entirely successful. A conscious endeavor to be original and personally effective either in morals or in art brings with it the constant danger of mere freakish and impertinent insubordination, and the danger is increased in a country like France, whose artistic traditions are memorable, well-defined and authoritative. That this danger is a very real one can scarcely be denied by any one who opened his eyes to the bizarre vulgarity and perverted ingenuity shown last summer in the Porte Monumentale of the Exposition, and the giddy and gaudy figure which surmounted it. In spite, however, of the many crimes which have been committed in the name of "nouveauté" in art, the movement as a whole deserves the most respectful treatment. Under contemporary conditions energy and new life cannot be infused into artistic work except in a self-conscious way and by rather forcible means. It has certainly stimulated the ambition of French artists, and under the stimulus the innovators have had their successes.

We present in the following pages some illustrations of household furniture, taken from Art et Décoration, which have been designed under the influence of this modernising movement. As they all were particularly prepared for exhibition in Paris last summer, they are presumably as good as anything produced by the more popular designers. The absence of the architectural forms, so characteristic of the old furniture both in France and elsewhere, will be immediately noticed, as well as the attempt to vary the ordinary decorative motives. It should also be kept in mind that these pieces are intended for French rooms, and have a fitness for such surroundings which they would rarely be likely to possess in the rooms of a modern American house. Whenever the word "Art Nouveau" appears under an illustration, it refers to a business establishment in Paris.

DRESSER.

Alex. Charpentier.



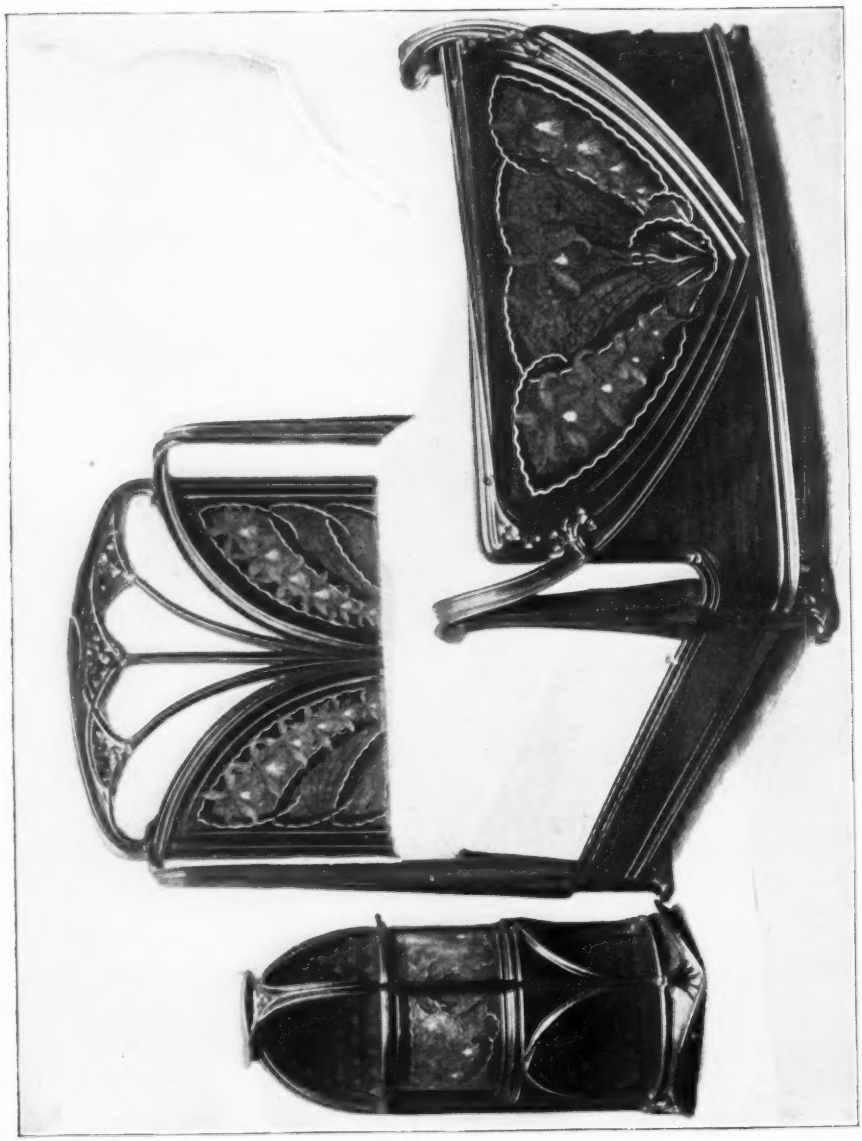
CHAIRS AND TABLE. Alex. Charpentier.

MANTELPIECE.

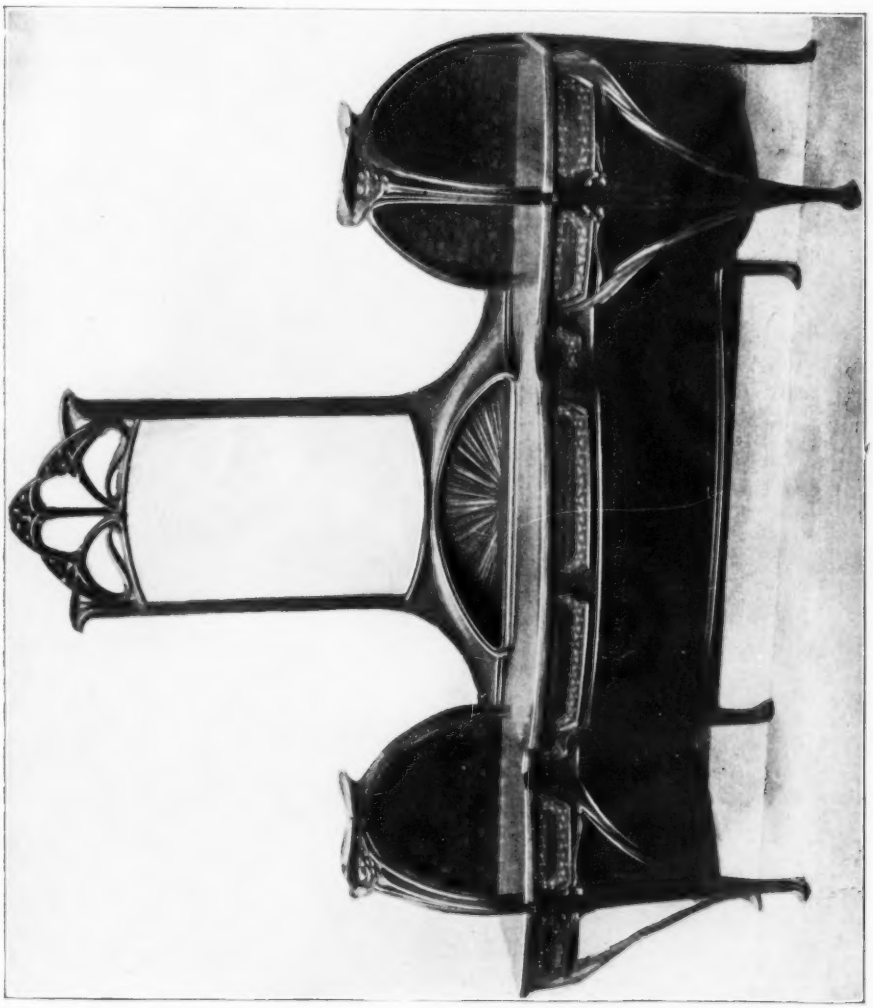
Alex. Charpentier.

CABINET.

L. Majorelle.

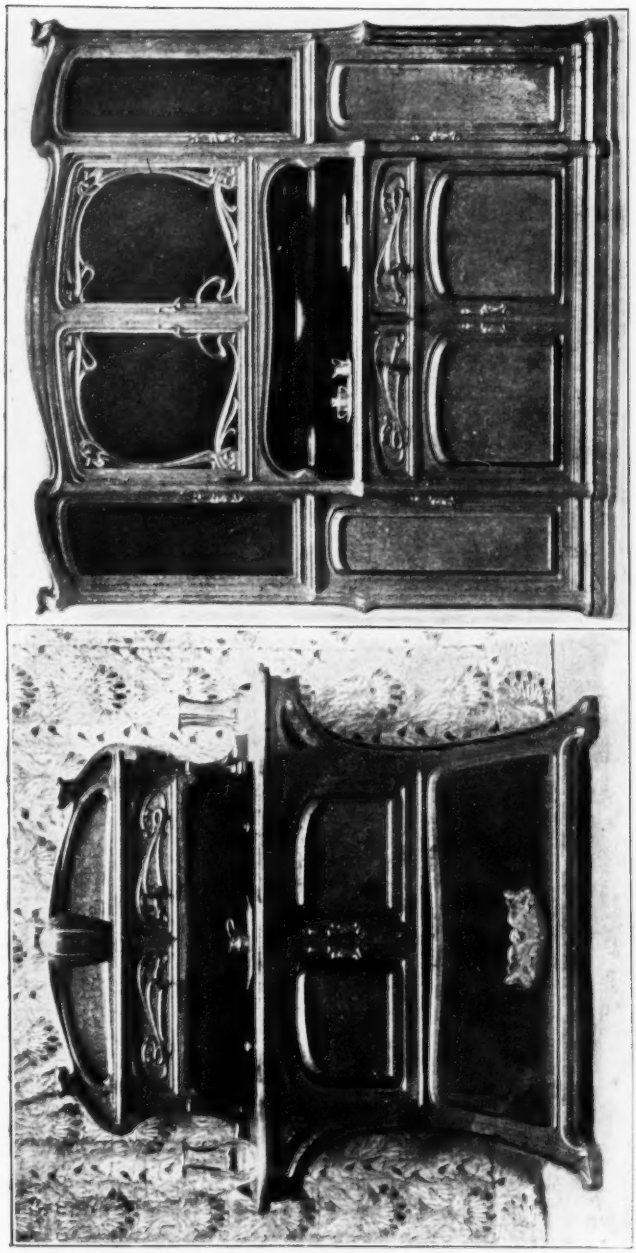


BED AND COMMODE. L. Majorelle.

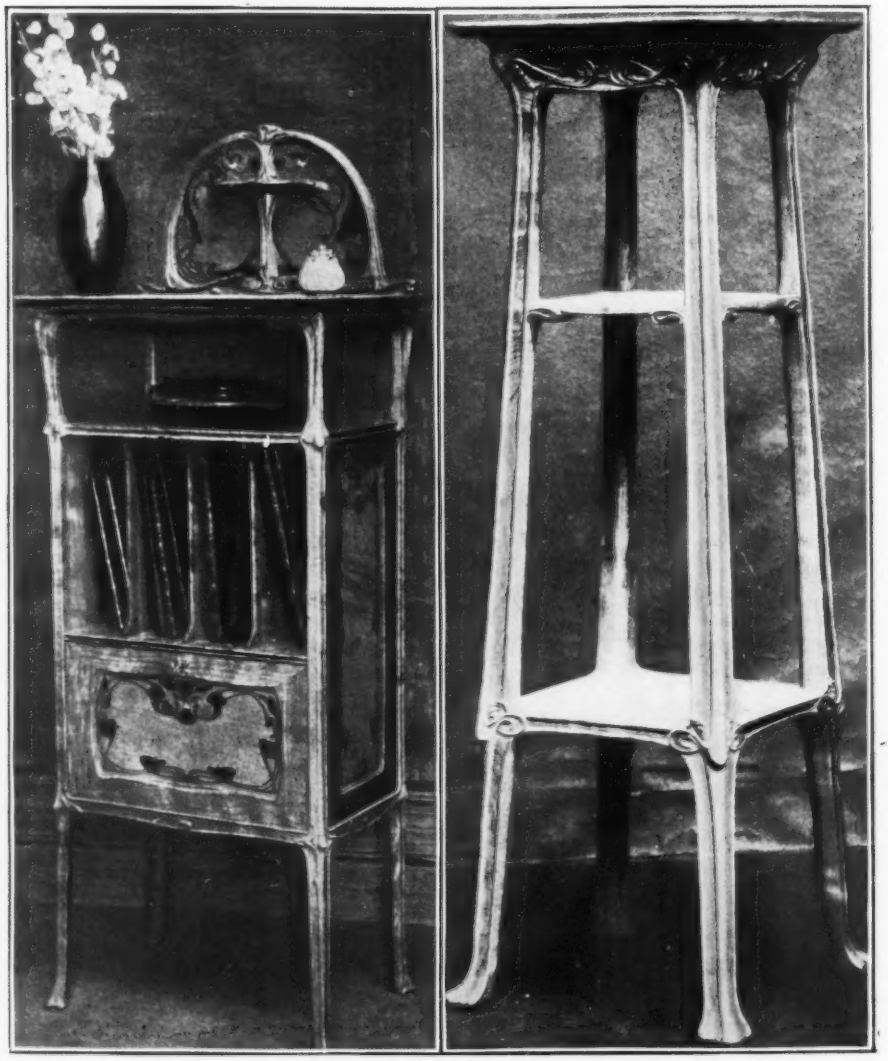


DRESSING TABLE. L. Majorelle

WARDROBE. L. Majorelle.

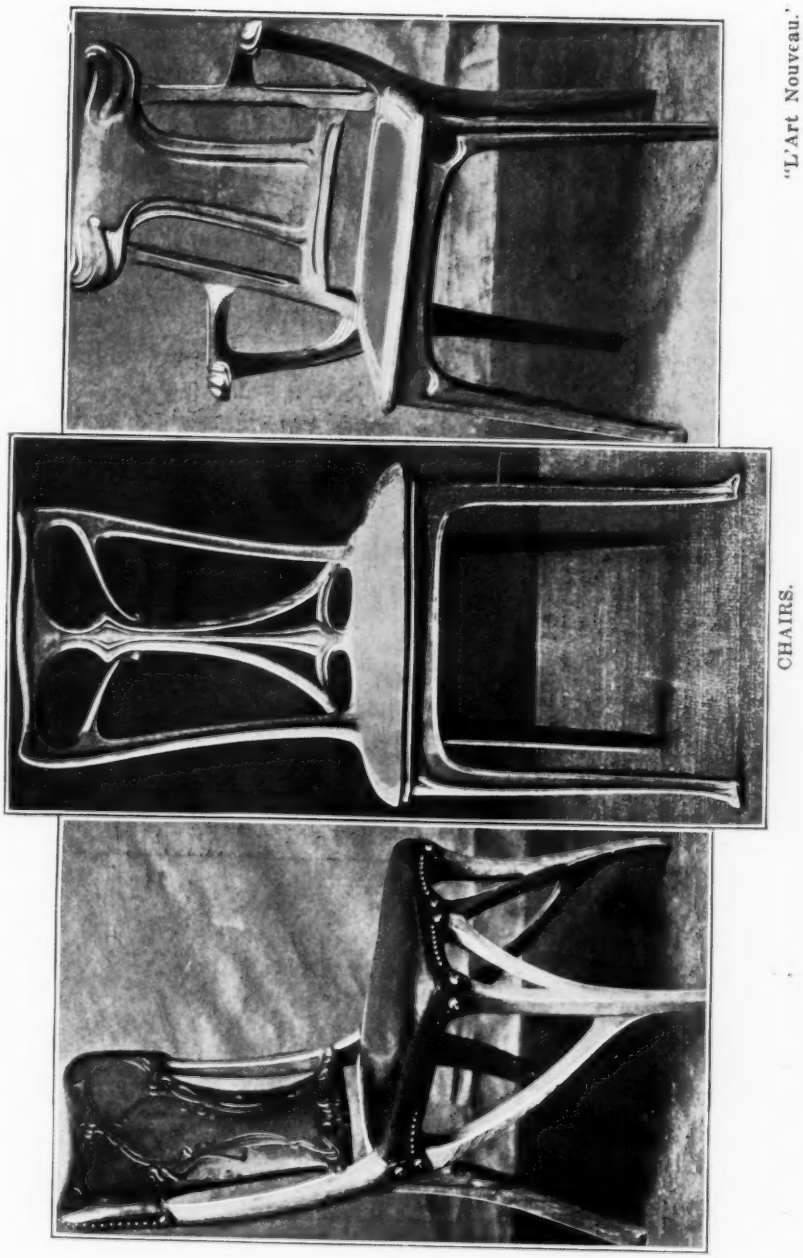


BUFFET AND DRESSER. "L'Art Nouveau" (Modèle de Gaillard).



CABINET AND TABLE.

"L'Art Nouveau" (Modèle de Colonna).



"L'Art Nouveau."

CHAIRS.

AMERICAN ARTISTS AND THEIR PUBLIC.

IF American artists are, as they complain, neglected by the people, it is not because the American people neglect to be interested in the arts. On the contrary, all kinds of art command the most resolute and enthusiastic interest from Americans who have passed a certain grade of culture. When abroad no foreign travellers hunt in the wilderness of the art galleries with such peculiar and persistent zeal. The history of painting and sculpture and their significance in life are among the most favorite subjects of study in the woman's clubs. Our own public collections are as much inspected as they deserve to be. A continual succession of earnest students passes before the Sargents and Abbeys in the Boston Public Library. The only visitors to Washington, who miss the wall decorations in the Congressional Library are perhaps occasional Congressmen and their clients.

Organizations are springing up all over the country to take care of local art interests, and to encourage the proper adornment of public places and buildings. The Municipal Art Society of New York, composed, indeed, almost entirely of artists, has been in existence several years, and has already done good work. According to a New York paper, Cincinnati is decorating its court house, and Baltimore means to do the same. The Municipal Art Society of Baltimore sent a delegation of important citizens to inspect the Appellate Court in New York, and on that occasion a collection of photographs of decorative paintings, actually executed in America, was brought together, which was surprising in extent and merit. That exhibition was immediately asked for by other cities, and a part of it has since been travelling from one city to another. Recently twenty organized bodies devoted to art and civic interests in Philadelphia met to form an Art Federation to promote the artistic treatment of city spaces and buildings. Chicago has a Municipal Art League and a Municipal Art Commission, and Denver has organized a league, which intends to ask the Legislature for power to pass upon all designs for work of a public nature. It is boldly proposed by the revisers of the charter to increase the power of the Art Commission of the Greater New York, so that hereafter its consent will be required to all structures which will cost more than a million dollars. Structures costing less than a million dollars probably do not reach the dignity of works of art. A bill will soon be introduced into Congress providing for a commission to consider and recommend a comprehensive plan for the architec-

tural improvement of the national capital. The beginnings have even been made toward the mural decoration of banks and business buildings. And so the tide swells in volume and compass, until in the end, if Americans are not the most artistic people in the world, it will not be for lack of trying.

The distinguishing thing about this popular interest in art is that it is of only occasional and doubtful assistance to the American artist. Those, indeed, who have been riding on the tide of the movement toward mural decoration have waxed as prosperous as some of their foreign contemporaries; and the magazines provide a steady and lucrative market for the work of the better and the worse illustrators. But when the picture does not serve some purpose of illustration, decoration or portraiture the chance of disposing of it are small indeed; and the great majority of the exhibitions of contemporary work are run at a loss. Millionaries occasionally endow art galleries, which are stocked chiefly with the work of French painters, and when they buy pictures for their own use, they are prone to pay a large price for the latest Parisian artistic sensation. The good American architects on the other hand can not complain of being neglected. They are, rather, all too prosperous. A great many of them certainly have more work than they can do consistent with giving proper attention to the refinement and detail of their plans. The office of a prosperous architect is organized like any other great business concern, particularly for the purpose of turning out in a manner satisfactory to their clients the designs of very many, too many buildings. What is, however, worst of all, the architect rarely occupies with respect to his client a position of sufficient independence. The average American is willing to spend a good deal of money for aesthetic effect, but very little for aesthetic propriety; and much of a conscientious arthitect's energy is wasted either in bullying or persuading his client to do the right thing. In short, wherever the genuine artist comes into contact with the public he is placed on the defensive; and he has to fight to maintain standards, which should be, and among a people of genuine artistic feeling would be, taken for granted.

It comes consequently to something like this: While Americans are very much interested in works of art, they have little instinctive love either of the work or the art, and the writer, who, in this respect, and I hope in many others, is a good average American, can discern the plain and sufficient reason. What we want is art with associations and a background. The popularity of the recent decorations is not in the least a tribute to the intrinsic merit of the painting; it depends almost entirely on interesting accessories. The Congressional Library is thronged with visitors, because the place in which the decorations are situated impresses the patriotic

imagination of the American people. They must be worth seeing, because there they are in the Congressional Library; and everybody says they are worth seeing. Once the civic order has formally approved them, they have obtained an importance beyond the power of mere paint. So it is with the popular interest in art history. We make a great to-do about Phidias, Amiens and Giotto. If we are a woman, we read essays on them to the members of our favorite club. We study them, we translate them into prose, we use them as educational influences, we find in them a source of spiritual illumination; but, I make bold to say, we very seldom genuinely enjoy them. We have not taken to them because of an actual and innocent love of beautiful things, but because the Garden of Art has been recommended to us as a serviceable training and tilting ground for our moral aspirations.

Many of the best contemporary American artists believe such an approach to the arts to be both pretentious and meretricious, and from the point of view of the integrity of their own work they are undoubtedly right. They have all of them lived and studied among a people to whom more than to any other modern nation, the native and innocent love of beautiful things is a birthright; and the value they put upon such things is the intrinsic value of the full, pleasurable articulate sensation. When they return home they find themselves surrounded by people whose interest in the arts, so far as it exists, is an interest dependent upon conventional motives and fastened upon important but accessory things. Under such circumstances there is but one course for them to take. They withdraw as far as they can into a society of their own making and paint the kind of pictures which they themselves like. They deal largely in tasteful and clever technical compositions, which may give the liveliest pleasure to an artist or a connoisseur, but which are mere patches of paint to the man in the street. This is not the highest kind of art, but it is surely better for them to stick to such subjects than to force an inspiration which does not exist, or fall back upon subjects that are merely picturesque and popular. Painting that does not primarily make an appeal to the decorative sense, that does not reach its chief effect through irreducible and incommunicable quantities of light and color, through large and adequate composition, and a sure sense of values; such painting sacrifices its own best excuse for being and loses integrity and beauty in the effort to be explicit. If we are obliged to make a choice, we should say that it were far better for a painter to paint entirely for his brother painters, to paint even from a frank delight in his own technical mastery and cleverness, than to compromise the native virtue of his art, and to corrupt the pertinence and relevance of his visual sense, by making his pictures appeal primar-

ily to a sentimental, didactic, or legendary interest. One of the best auguries for the future of American art is that our better American painters have remained true to their technical standards, and that they have not been tempted to compromise their artistic integrity by an appeal to more popular motives.

The editorial optimism of some of the daily newspapers has been able to discern a healing of the breach between American artists and their public in the success of the municipal art movement. There can be no doubt that the success of this movement has its encouraging aspects. The most encouraging of all is the fact it has for the most part been directed by competent judges and has led to the selection of competent painters. It is supported, consequently, by the men representing the best standards of contemporary American taste, and it deserves their support. The management of the Chicago Fair set an example in this respect for which all people interested in American art cannot be too grateful. It broke away from the prevailing tendency up to that time of preferring a comparatively incompetent local artist to a competent outlander. It secured the assistance of the very best talent and training which the country could afford; and it set a standard which has been maintained ever since—which has been loyally maintained by the management of the Pan-American exhibition at Buffalo. But for reasons which have been already intimated, I cannot think that the mere employment of good architects, painters and sculptors upon public building and decoration will, of itself, tend to make the better American artists in any genuine sense popularly influential. It is undoubtedly true that these decorations are for the most part very respectable and in some cases even very admirable performances, but they are not the sort of painting to seize upon the popular imagination or awaken deep popular feeling. The subjects, which have been given to them, are either symbolic or historical, and they are not sufficiently real and intimate either to the artist or his public to awaken any intense enthusiasm. With the example of St. Gaudens' Shaw monument before us it would be foolish to maintain that an historical subject running over into appropriate symbolism cannot be so treated as to make one quiver with sympathetic feeling; but for the most part one cannot help remaining interested but cold. The associations of our civic life are not at present such as to be particularly inspiring, and it requires something more than an intelligent use of a thorough training to find appropriate forms for such abstract ideas as Truth, Justice or Purity. American decorators exhibit on a larger scale much the same good qualities as the painters of easel pictures. Their work shows an intelligent and sometimes a large conception; it is subordinated to the architec-

ture and keeps its place upon the wall; and the ideal female figures have often real elevation and charm. But its popularity depends chiefly upon the buildings, with which these decorations have been associated and the way they have been advertised.

That the plastic arts in a modern democratic community can ever be both genuinely popular and thoroughly self-respecting is at least a very dubious question. Undoubtedly art has been at its greatest periods a thoroughly popular growth, but it required during these periods a very unusual combination of causes to produce an art which, while being prompted by a native and spontaneous sense of beauty, at the same time spoke the popular language. In Periclean Athens, in the French Mediæval communes and in the north Italian cities of the 15th century, certain similar conditions were present in each and every case. The peoples themselves were artistically gifted; the social groups into which they had gathered were small and homogeneous; they spent themselves in lives of the most violent and exciting social, political and military activity; and their religious realities and moral ideals were accepted almost without question, and, being symbolized and embodied in legends and sacred history, were peculiarly and completely adapted to artistic expression. None of the foregoing conditions exist at the present time in the United States. It is generally admitted that people of Anglo-Saxon and Teutonic blood have been deficient in artistic gifts compared to the people who have inherited a larger share of Latin blood and Latin tradition. Modern society is politically and socially organized, not on a communal, but on a national basis, and the consequence is that, compared to the small cities I have mentioned, a popular movement at the present time has to comprehend a far larger number, and a much greater variety of people, so that it is not a matter of surprise that the mass is more sluggish and the average is lower. Furthermore, we live to a much greater extent humdrum and routine lives, and are so much better protected than they were from the opportunities and risks of an adventurous existence, that our blood is rarely quickened as theirs was either by danger or by passion. Finally our religious realities are too formless and remote to be articulate in any except landscape painting; and our moral ideals are for the most part strenuous, unimaginative and protestant. It is no wonder that modern artists, both American and foreign, are often languid and half-hearted in their work, often go astray in pursuit of false gods, and in order to protect themselves from their surroundings, are given to marking a strong contrast between art for art's sake and art for the sake of anything else.

It is by no means necessary to draw an inference from the above facts that American art will always remain at cross purposes with

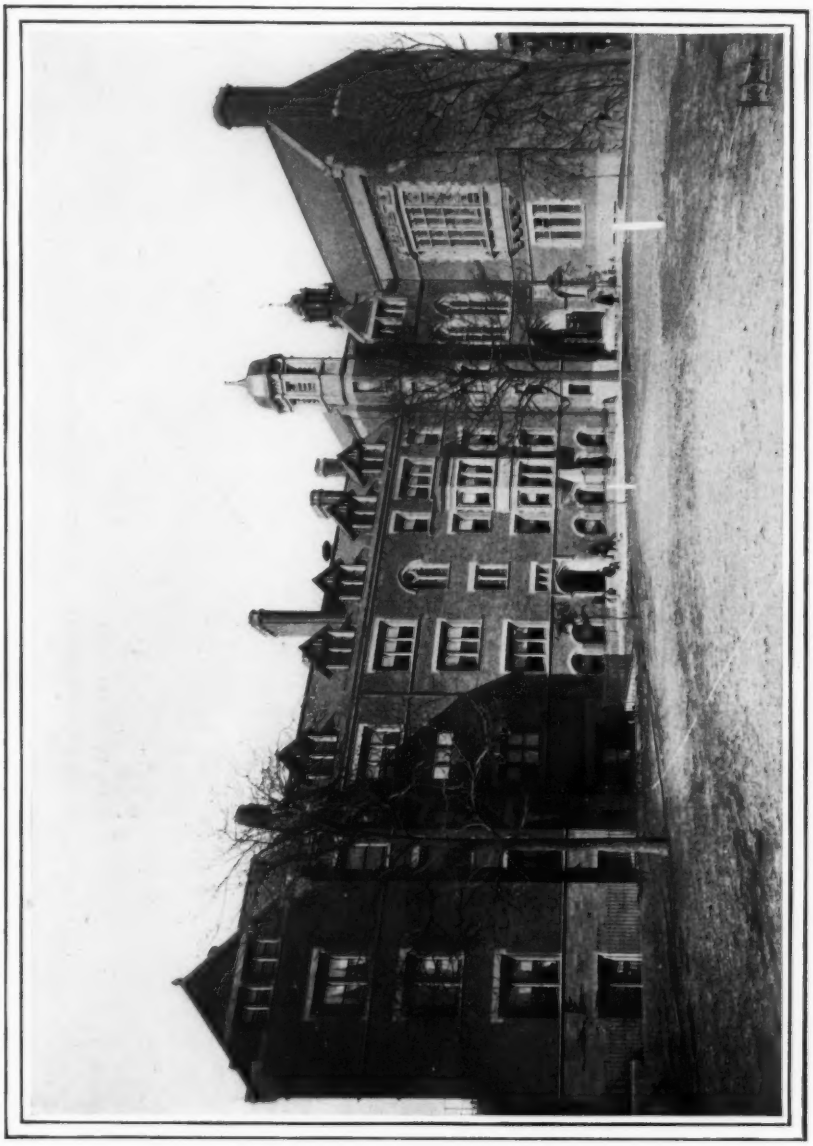
popular life. The modern national democratic society is a new thing under the sun. Its potentialities are only beginning to be vaguely foreshadowed, and if such an enlarged community can ever get fairly under way, if its members can ever become closely united by some dominant and guiding tradition, there is no telling what may come of it. Such a vast source of energy, properly concentrated and guided, might accomplish—well, I do not, at any rate, know what it might not accomplish. Modern industrial organization and means of communication certainly increase enormously the mechanism of social interchange, and make it possible to quicken with one life great numbers of people, living very far apart and subject to very different conditions. All that is, however, a matter of speculation, almost of faith; and the grim fact remains that it is the tendencies which are strongest in modern life, and which are stronger than anywhere else in the United States that for the time being make the work of a plastic artist difficult and from a social point of view artificial. Modern industry is too entirely mechanical; modern culture too bookish, intellectual and self-conscious; and modern religion either too narrow or too eclectic, too half-hearted or too zealously practical. The modern artist is surrounded by conflicting and distracting voices. Instead of being able to take his subjects for granted, he is obliged to go out in search of them himself, and unless he be a man of rare intellectual and moral vigor, he finds these voices so noisy, discordant, and meaningless, that who can blame him for shutting his ears and painting pictures whose language does not carry beyond the studio?

Let it be added, however, that given the conditions, American æsthetic improvement is running about as wholesome a course as could be expected. It is better for the artists to be exclusive than to be pretentious and sentimental; it is better for the public to be clumsily and erroneously interested than to be utterly and frankly indifferent; it is better that both artists and public should try to do their best according to their lights than that the former should lose their independence and the latter their aspiration for æsthetic culture. Of course the business is being done in a very conscious manner; and the professional and popular ideals of art are hard to reconcile. But Americans are obliged to pursue such good things consciously, if they are going to pursue them at all, and the only way in which a creditable artistic tradition can be established is by the firm and steady practice and realization of such conflicting ideals until they are properly modified and sufficiently established. It must be remembered that the vitality of American life and the unspoiled purity and freshness of its ideals enable it to carry with impunity an amount of raw and crude self-consciousness, and an amount of erroneous experimentation, which would be fatal to an

older community. A good start in the right direction has been made in the last twenty years, and within the next twenty, or thirty years, the probable issue will be plainly indicated. There is not much chance that this issue will be a wonder-child, but he ought to be a lusty and comely youth.

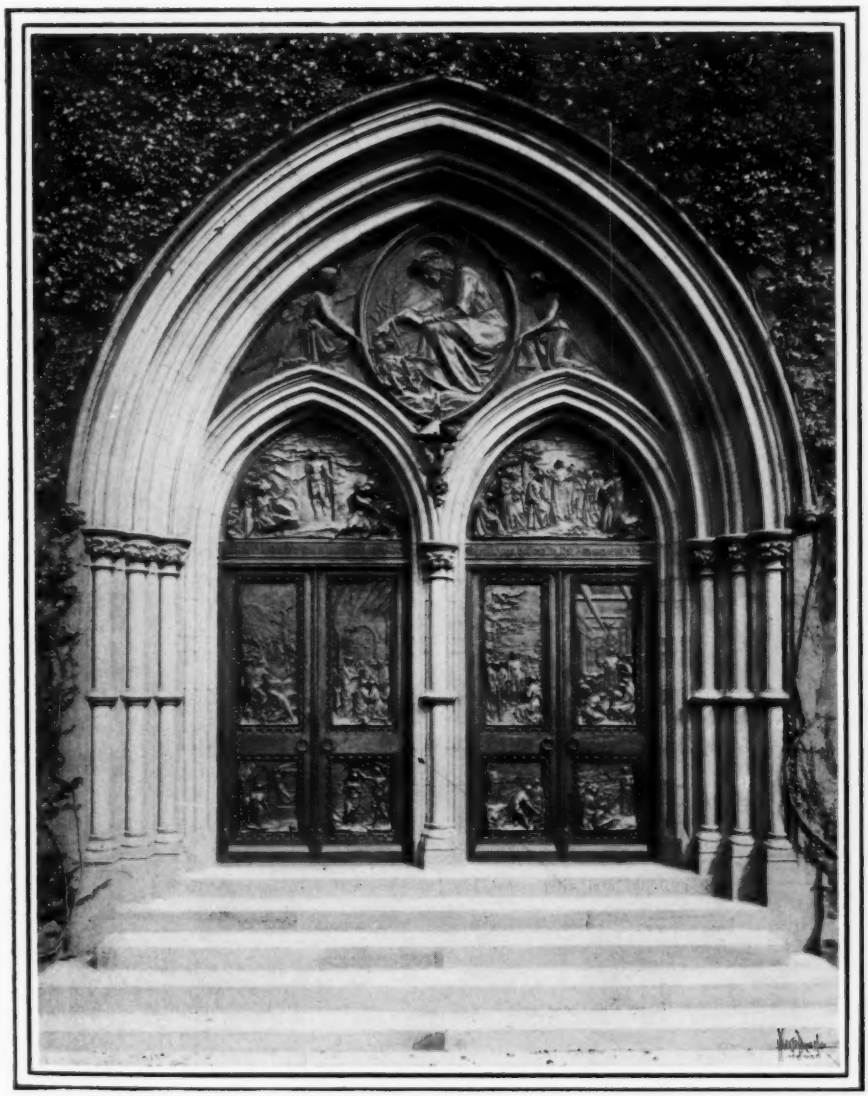
Herbert Croly.

Recent American Architecture



HOFFMAN HALL. GENERAL THEOLOGICAL SEMINARY. C. C. Haight, Architect.

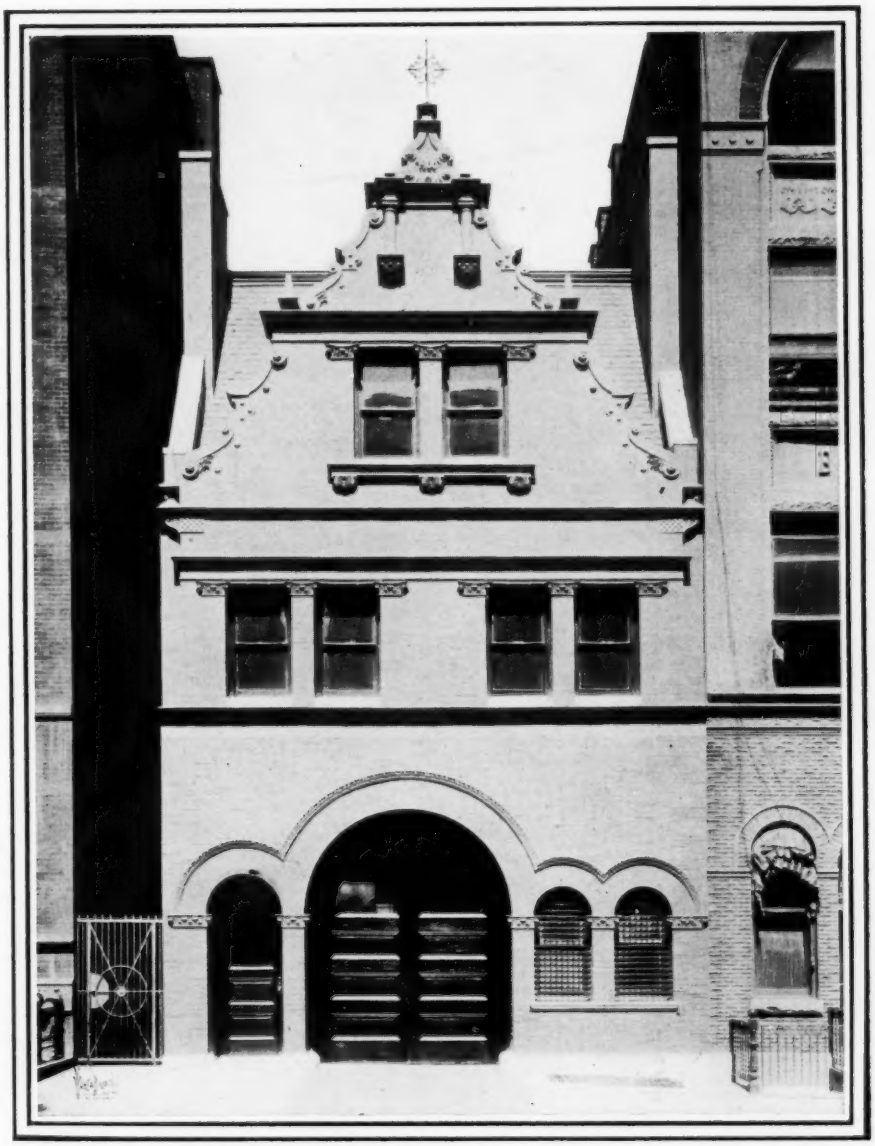
20th St. and 9th Ave.



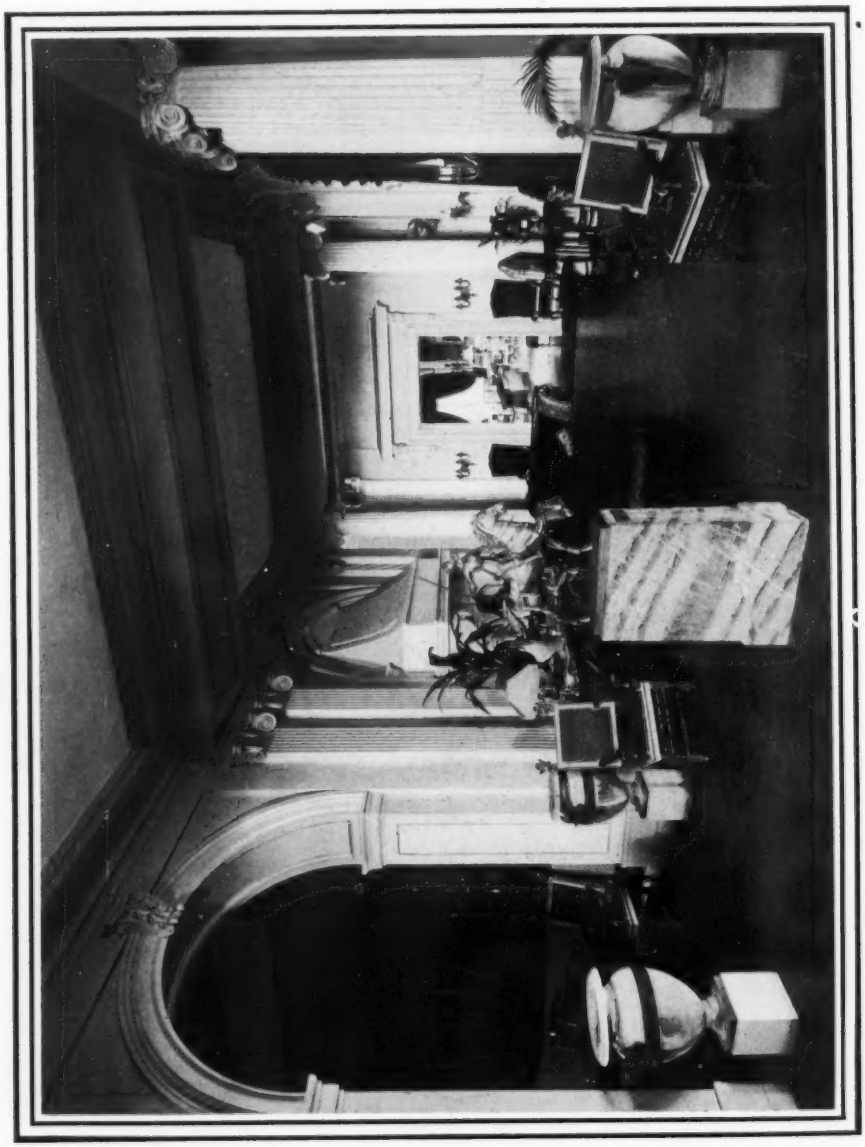
NEW BRONZE DOORS, CHAPEL, GENERAL THEOLOGICAL SEMINARY.
J. Massey Rhind, Sculptor.

REFECTORY IN HOFFMAN HALL, GENERAL THEOLOGICAL SEMINARY.
20th St. and 9th Ave.

C. C. Haight, Architect.

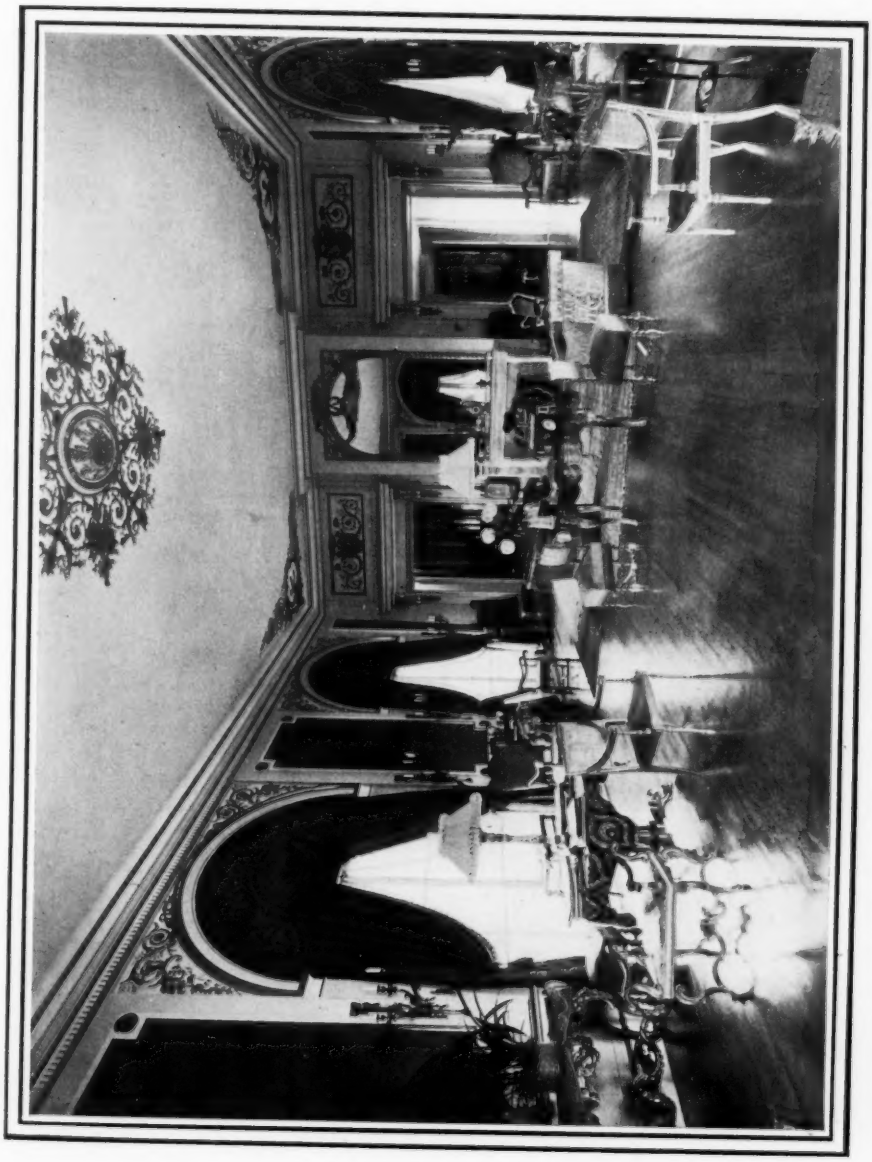


STABLE IN EAST 78TH ST., BELONGING TO MRS. ARNOLD.
S. Edson Gage, Architect.

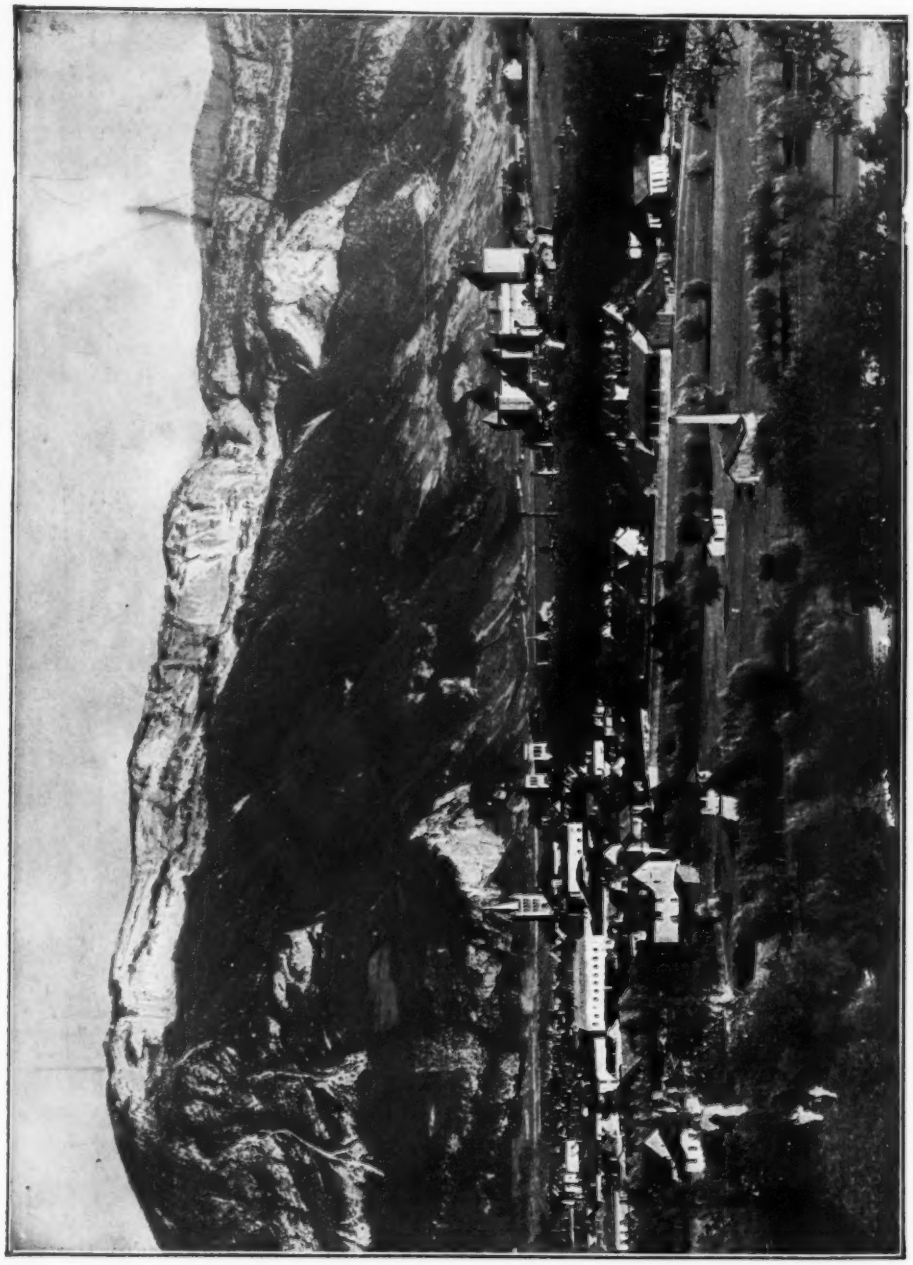


HALL. RESIDENCE OF E. C. BENEDICT, ESQ.
Indian Harbor, Greenwich, Conn.

Carrère & Hastings, Architects.



DRAWING ROOM. RESIDENCE OF E. C. BENEDICT, ESQ.
Indian Harbor, Greenwich, Conn.
Carrére & Hastings, Architects.

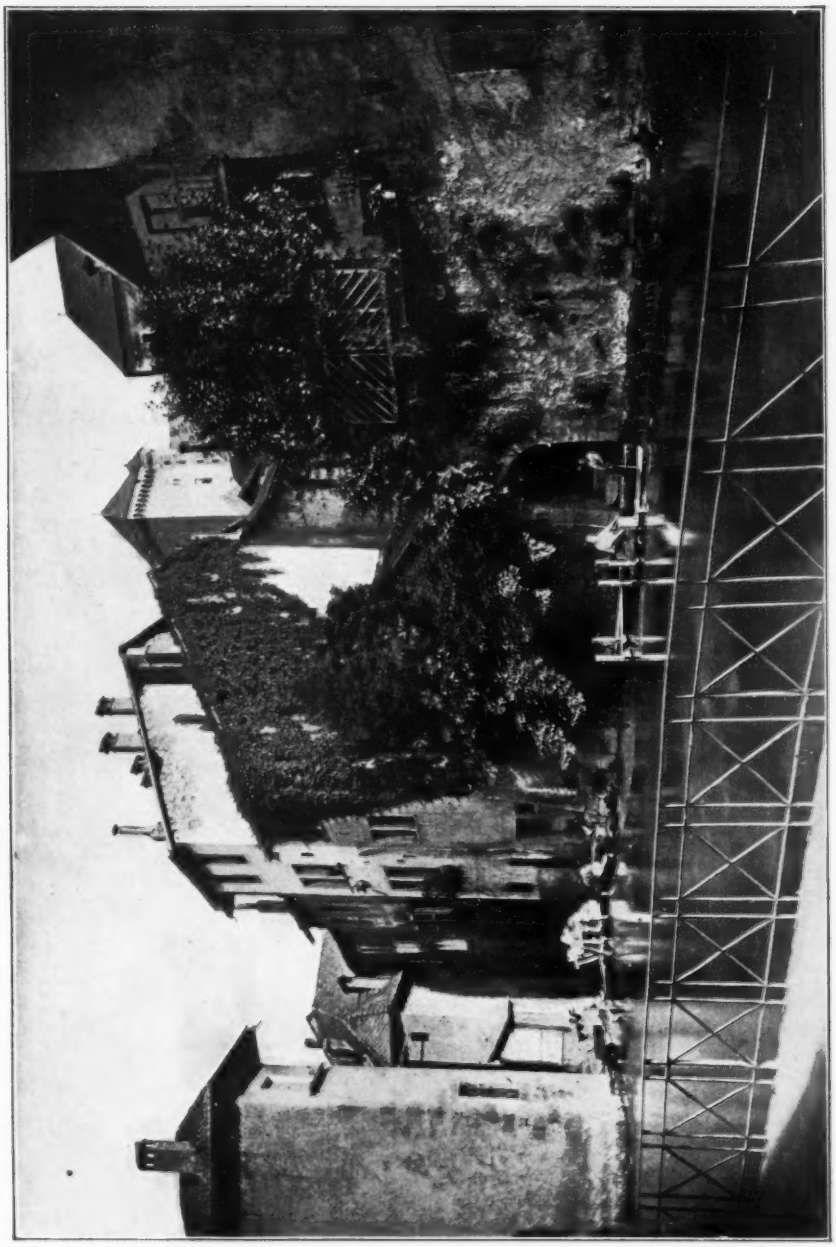


ANNECY: BACK VIEW OF CHATEAU.

CANAL DE THIOU.

The Town and Castle of Annecy in Savoy

By courtesy of the Architectural Review, of London.



ANNECY.

PALAIS DE L'ILE.

CHATEAU DE L'ILE.

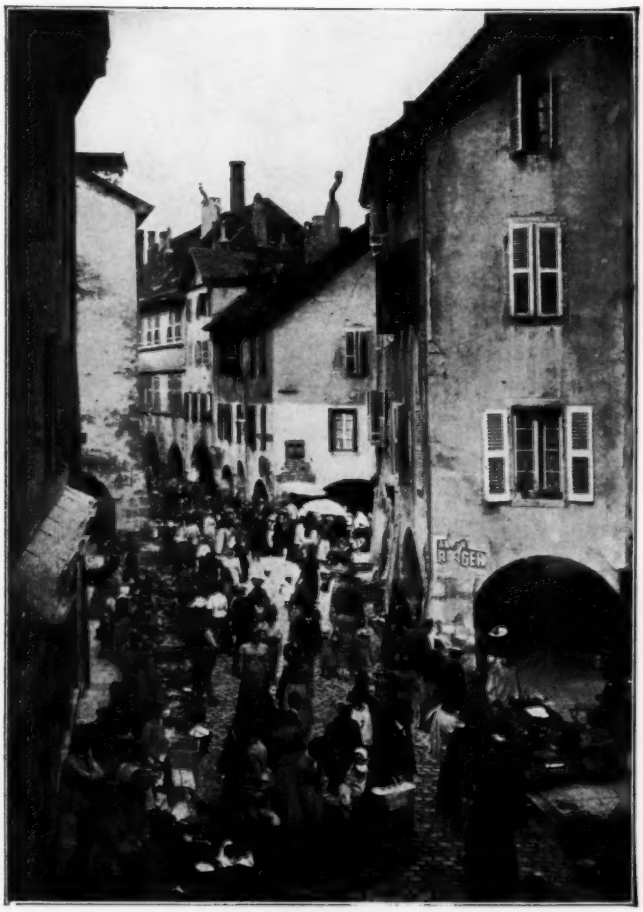
PALAIS DE L'ILE.

PALAIS DE L'ILE.
From a water color drawing by J. P. Cooper.

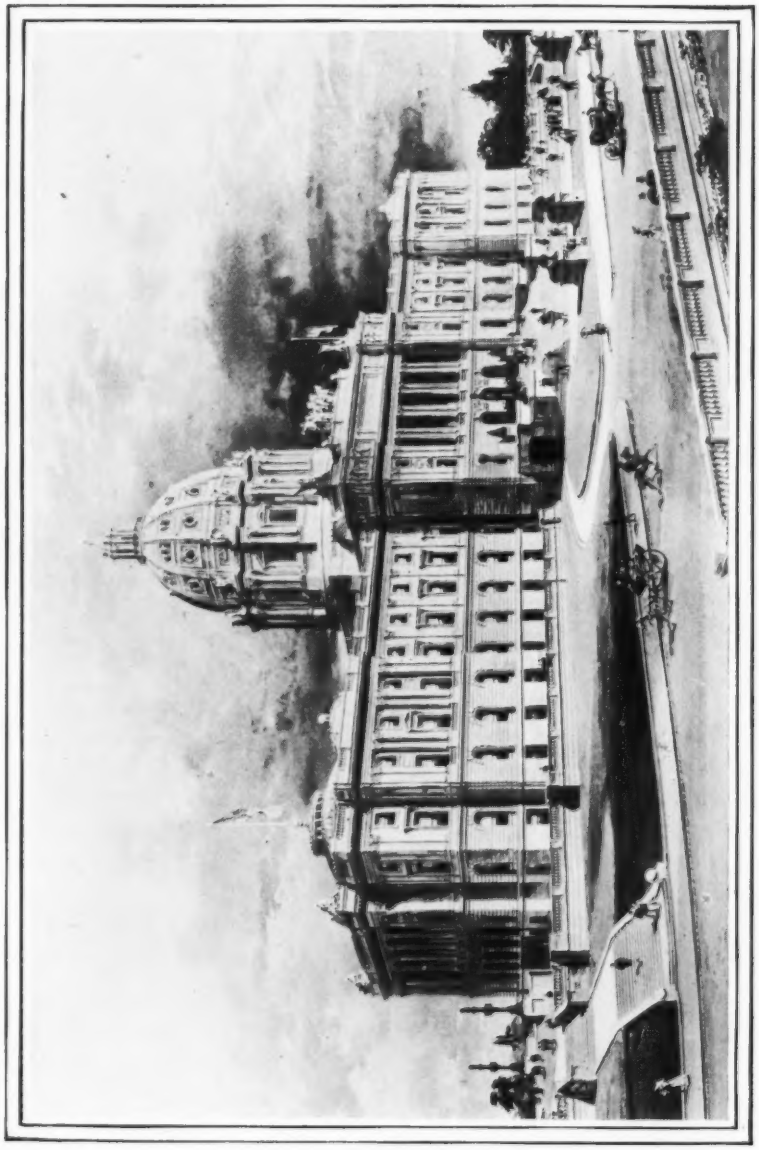
PORTE ST. CLAIRE.

GATEWAY.

ENTRANCE TO THE OLD PRISONS.



ANNECY ON MARKET DAY.



CAPITOL IN ST. PAUL, MINN. Architect, Cass Gilbert.

THE NEW CAPITOL IN ST. PAUL.

WE present herewith some illustrations of the new capitol for Minnesota, which has been in the course of erection at St. Paul for the last five years and is now approaching completion. The building occupies the centre of a crescent of hills overlooking the city from the north. Its length is 435 feet exclusive of the masonry approaches, and it is 228 feet deep through the centre wing. From the ground to the top of the ball above the dome will be 220 feet, or 400 feet above the river. It is to be faced with white Georgian marble, except the basement, which is of Minnesota granite. A number of changes have been made in the design since the original drawing of the architect, Mr. Cass Gilbert, upon which the accompanying illustration is based, was accepted. The loggia in the centre has been changed from the order, as shown in the illustration, to columns and arches, and the parapets at the right and left of the exterior stairway, instead of being the same width as the piers at each end of the loggia, have been cut down to one-half that width. Neither does the illustration show the main approach of the building, which will consist of a sumptuous esplanade, ornamented with sculpture and fountains, and leading to a monumental stairway, the whole being similar in design to the Piazza di Spagna but smaller in its dimensions.

The main sculptural group on the exterior of the structure will be a quadriga of bronze representing the progress of the State, which will crown the central pavilion over the main entrance. Immediately below, in front of the false attic, surmounting the cornice which defines the altitude of the main structure, will be placed six figures by Mr. Daniel Chester French, which are intended to embody the moral qualities which have contributed to the stability and growth of the State, viz.: Prudence, Truth, Integrity, Bounty, Courage and Wisdom. Statues embodying the attributes of ancient and modern law will crown the pavilion of the Supreme Court and other allegorical figures will be suitably arranged. Another figure which deserves special mention is a small image of Winged Victory, designed by Mr. Cass Gilbert, perched above the main entrance in front of the key block, like the little figure of Mars on the Arch of Titus. The Victory with arm outstretched holds a wreath, as if tendering it to those who enter. This figure is only three feet high and being close to the eye will have a tendency to magnify the proportions of the loggia as viewed from the approach.

Entering the main entrance in the centre of the south front the visitor passes into a marble vestibule, 15 × 60 feet, thence into the corridor which surrounds the rotunda and thence into the rotunda, which is 65 feet in diameter. Looking from the centre to the right and the left may be seen two broad stairways, which will form an impressive feature of the interior. Each will rise in three runs through the main story, offering a vista of about 185 feet to a great niche on the second floor. The rotunda will be faced with stone and adorned with polished marble columns. It will show a clear interior height of about 130 feet. The walls of the rotunda will be simple and bare, all color treatment being reserved for the vaulting of the dome. This will be adorned with suitable decorative paintings, the color of which will be subordinated to the architectural treatment, so as to preserve a unity of effect.

The character of the interior finish has not yet been fully determined. The building can be completed within the original appropriation of $2,000,000, but unless more money is forthcoming it will have to be finished off in the plainest possible way. It seems probable, however, that at the present session of the Legislature appropriations will be made to decorate the interior, to construct the esplanade mentioned above, and to enrich it with statues and soldiers' memorials. The motives for any interior decoration will be supplied by the history of the State, which particularly during the earlier years was full of picturesque and stirring incident.

BOUNTY.
Daniel C. French, Sculptor

WISDOM.
Daniel C. French, Sculptor.

COURAGE.
Daniel C. French, Sculptor.

INTEGRITY.
Daniel C. French, Sculp or

TRUTH.

Daniel C. French, Sculptor.

PRUDENCE.
Daniel C. French, Sculptor

THE CARLTON HOTEL—LONDON.
H. L. Florence, Architect.

M. BOUVARD.

J. A. BOUVARD.

Inspector-General of the Architectural Department of the city of Paris, Director-in-Chief of the Architectural Department of the Universal Exposition of 1900.

WHEN M. Alphand died, the people of Paris experienced a thrill of sorrow, with which was mingled a certain amount of anxiety as to who would venture to assume the onerous task of taking his place. Parisians still retained a vivid recollection of the wonders he had achieved in 1889, at the time of the Universal Exposition. It was he who drew, or supervised the drawing, of all the plans; it was his magic wand that caused buildings to spring up, galleries to extend themselves, and nearly 200 acres of bare ground to change into a veritable city—a city of which all the streets were gardens and all the houses palaces.

But the public were quickly reassured. It was known that M. Alphand had been wise enough and disinterested enough to train a number of pupils, not wishing, as some selfish men might have done, that his work should perish with him; and from the ranks of the army of devoted collaborators who had helped him in his gigantic and courageous enterprises there stood forth one name which met with almost unanimous approval—that of M. Bouvard.

Rarely has a choice been more completely justified, as will be seen from the account which we propose to give of the origin and career of the talented architect who was Chief of the Architectural Department of the Exposition of 1900.

M. Bouvard was born on the 19th of February, 1840, at Saint-Jean de Bournay, in the Department (County) of Isère, and became an orphan at the age of eleven years. He was educated at the College of Vienne. Having entered the office of an architect of that city, M. Quenin, he soon acquired a passionate fondness for his art.

But the field of study which offered itself to him there was too limited, and, like all artists who desire to see and learn, he made his way to Paris, where he was admitted into the *Ecole des Beaux-Arts*. When he left that school he was the possessor of several first-class medals. One of his masters, M. Constant, detecting special aptitude in his youthful pupil, made a friend of him, and this valuable intimacy has had a happy influence upon his after career.

In 1864 M. Bouvard entered the service of the City of Paris as conductor of the works of the Church of Saint-Laurent, to which was then being added its present main doorway, in the Gothic

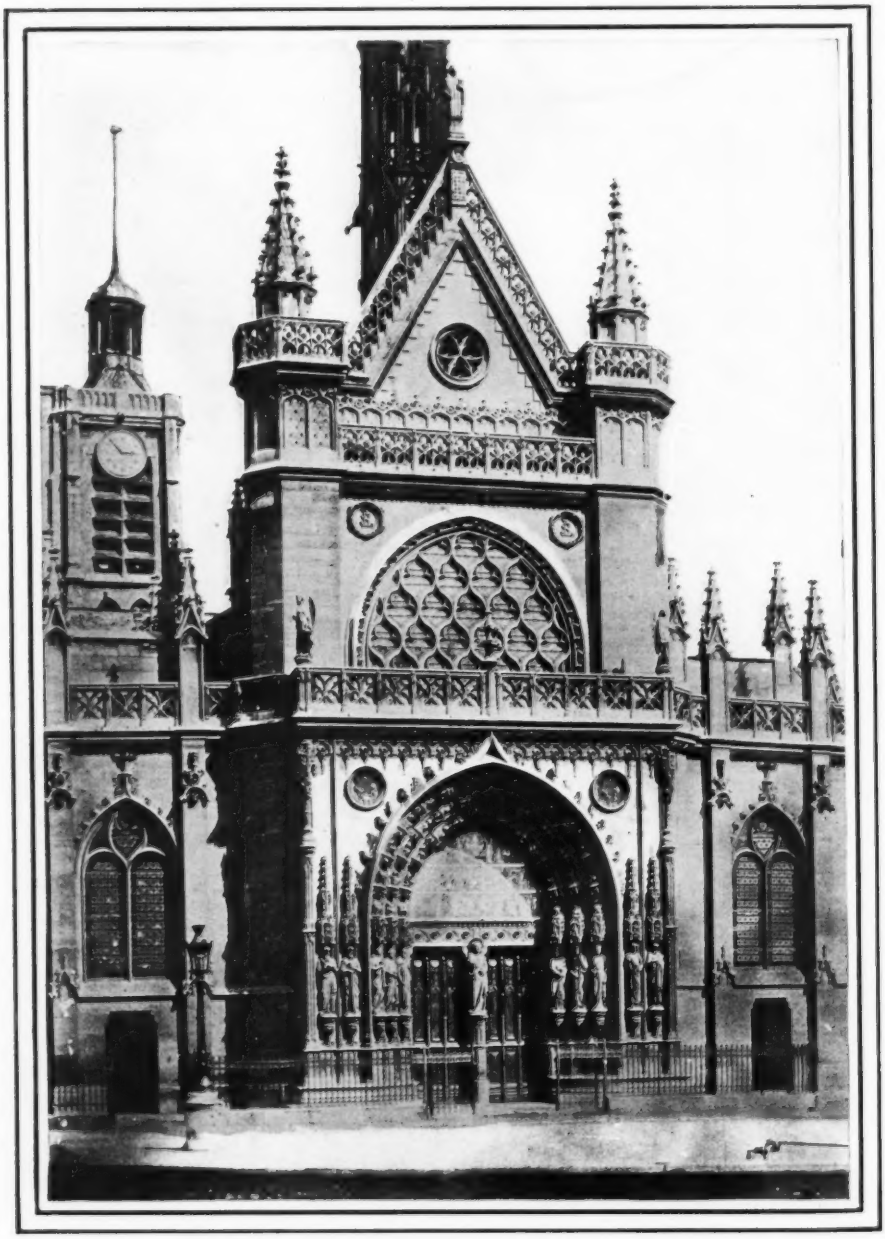


FIG. 1.—DOORWAY OF THE CHURCH OF ST. LAURENT.

style. (Fig. 1.) Soon afterwards he took part, as Inspector of Works, in the erection of the new Town Hall at Belleville, a district in the eastern part of Paris.

During the war of 1870 M. Bouvard was in charge of all the works connected with the defense in the nineteenth and twentieth wards of the capital. But this participation in the struggle between France and Germany, however useful, did not seem to him sufficient, and, in the month of November, he left this post, which he considered too sedentary, in order to play a more active and more perilous part. He joined a company of foot and was wounded in the fight at Buzenval, on the 19th January, 1871.

When peace came M. Bouvard wanted to resume his former position in the service of the City of Paris, but is was occupied. He was, therefore, obliged to wait. Under M. Constant Dufeux, he coöperated in the works at the Luxemburg Palace, and had immediate charge of the preparing of this edifice for use as municipal offices, the City Hall having been burnt down by the Communists in May, 1871. As a reward for these labors, M. Bouvard was restored to his old position in the Central Administration of the City. From this period dates his connection with M. Alphand, who soon made him one of his most trusted auxiliaries, and from that time forward never failed to speak in the highest terms of M. Bouvard's activity and his talent as an architect.

When the Senate and the Chamber of Deputies quitted Versailles and returned to Paris, the various services of the Prefecture of the Seine had to be transferred to the Tuileries, and it was again M. Bouvard who was entrusted with the fitting up of the portion that still remained of the former imperial residence. Within three weeks, the Pavilion de Flore was ready to be used for its new purpose. This was a great feat, and the city government did not stint its praises to the skilful architect who had so cleverly rescued it from an awkward predicament.

These several pieces of work had not yet brought M. Bouvard in contact with the public, but the Exposition of 1878 provided him with an opportunity to draw attention to himself. Already, at Vienna in 1873, at London in the following year, and at Brussels in 1876, the assistance rendered to M. Alphand by his lieutenant had been remarked, and expositions had almost become his specialty. Consequently, when, acting on the report of M. Viollet-le-Duc, the City of Paris determined to show visitors to the Exposition the machinery of its organization in a special pavilion, M. Bouvard seemed to everybody to be the proper man to erect that edifice.

Having only a limited sum at his disposal, M. Bouvard wisely confined his ambition to providing a good lodging for the City's exhibits. Nevertheless, he constructed a pavilion which was sufficiently agree-

able in appearance to save it from destruction when the Exposition came to an end. (Fig. No. 1a.) The City of Paris's building was dismounted piece by piece and reconstructed on the Champs-Elysées, where it remained until torn down in order to clear the ground for the Exposition of 1900. It is not without regret that we witnessed the disappearance of this brick-and-iron edifice, whose picturesque medley was not exempt from analogy with the many colored chatoyment of the Italian façades.

When the Primary Education Act was passed in 1882, M. Bouvard was charged with the duty of providing speedily the means to enforce it in the City of Paris. This afforded him an occasion to achieve another feat. In less than six months he built fifty-two tem-

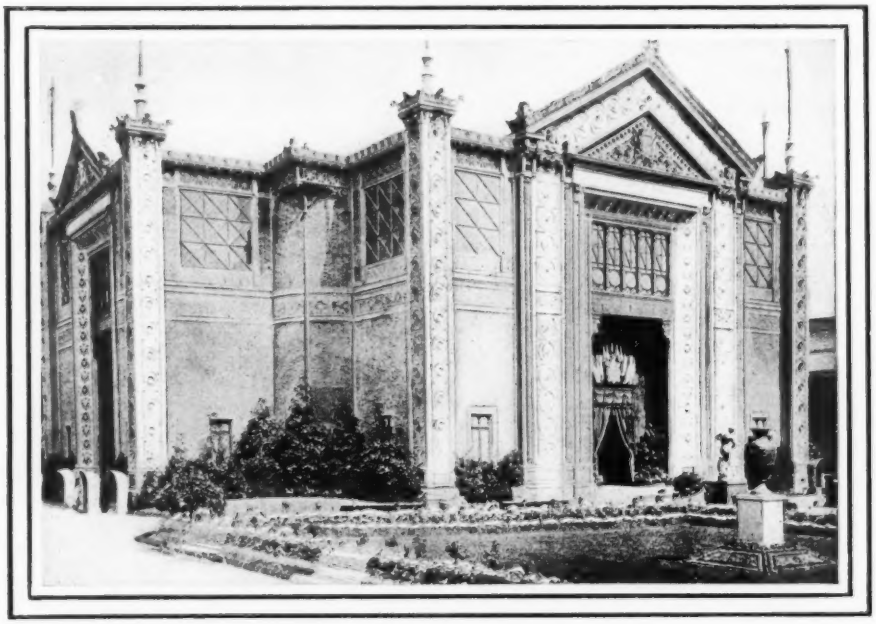


FIG. 1A.—PAVILION FOR CITY OF PARIS.
Built for the Exposition of 1878.

porary schools. Simultaneously with this pressing work, our indefatigable architect undertook the erection of a large number of permanent schools, which were planned according to a general programme based on considerations of economy, hygiene and pedagogy.

In this direction M. Bouvard has been eminently successful, and quite recently he has put the seal to his reputation by constructing the group of schools in the rue Saint-Lambert (Fifteenth Ward), a plan of which is here given. The scheme comprised: 1, a boys' school for 300 pupils; 2, a girls' school for 300 pupils; 3, an infants'

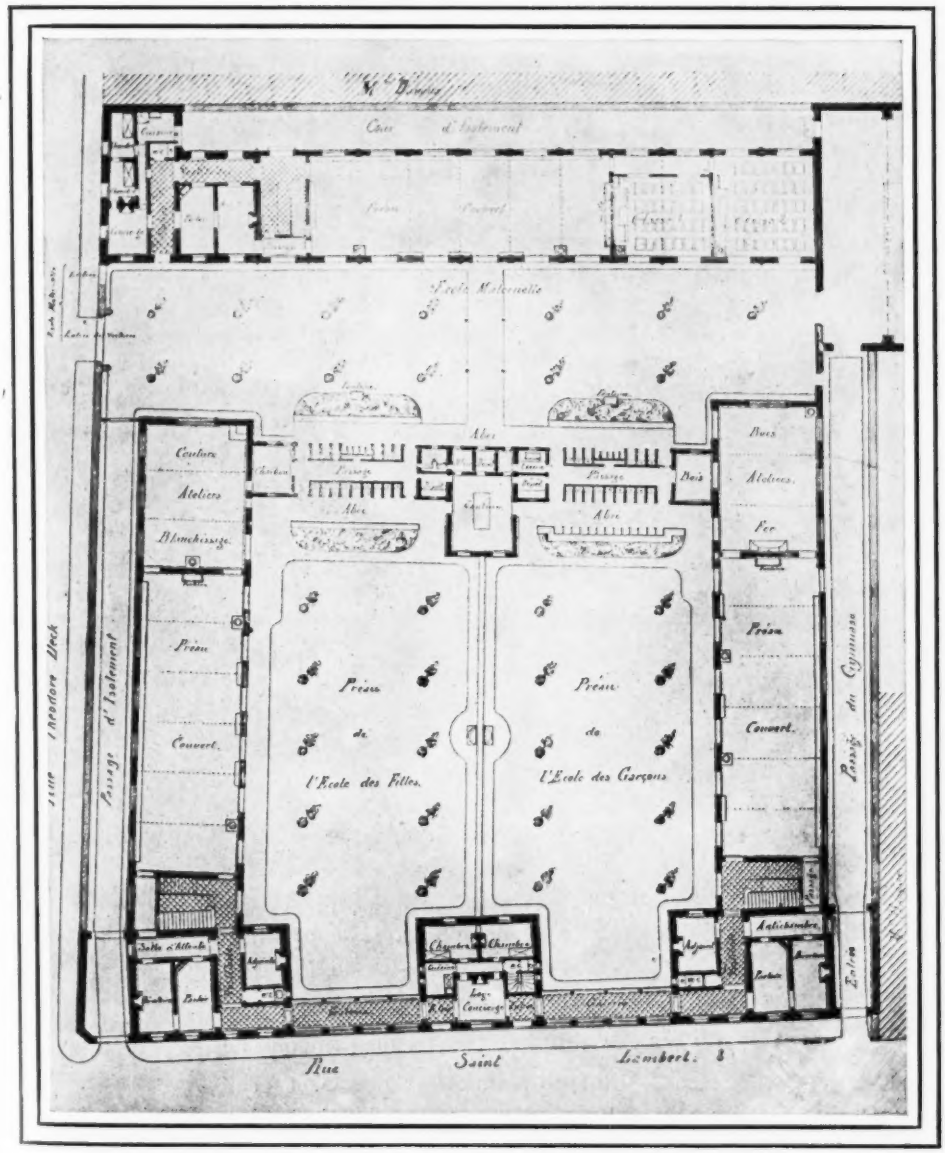


FIG. 2.—PLAN OF SCHOOLS ON RUE SAINT-LAMBERT.

school for 300 children; 4, a gymnasium for the use of the schools and the gymnastic societies of the ward.

As will be seen from the general ground plan (Fig. 2), the course adopted by the architect may be summed up as consisting in the first place of one leading feature, viz.: grouping together the three uncovered playgrounds, and placing the principal school buildings as far apart as possible. The buildings have been placed parallel to the sides of the ground and sufficiently distant from the edges to leave an isolating courtyard. The remaining part of the ground at the rear, on the right hand side, came in naturally for the gymnasium. The cantine, placed in the center, serves all three schools. It should be noted that the children have no direct communication with the cantine, a truck carrying the meals being conveyed into the playground of each school. Note should also be taken of the passage separating the closets and allowing of the isolation of the external air, and the supervision of the flushing cisterns, which is particularly troublesome in winter; the covered ways connecting the three playgrounds with the cantines and closets, and finally, the arrangement of groups of shrubs which mask, lightly but effectually, the four rows of closets.

As regards the means of execution, the principle adopted is that of slight walls with metallic framework for the class-rooms, and of thick walls for the administration buildings, containing the apartments of the head master and head mistress.

The brick and stone, mingled with the bright colors of the ironwork and the darker woodwork, give these buildings a fresh and bright appearance which is particularly appropriate to a school.

The walls dividing the playgrounds are low, so as to confine the separated spaces as little as possible.

Each class-room on the first story is ventilated by inlets placed in the window sills and by pipes leading to the roof. The class-rooms are lighted from one side only. Frames placed high up in the partition which divides off the passage give light to the upper part of the room and contribute to the ventilation.

In designing these schools M. Bouvard applied those excellent principles by which he had previously been guided in the construction of the Ecole Nationale Professionnelle at Voiron, in the County of the Isère, namely: well-planned installations; nothing luxurious, either internally or externally, but all the comfort that can be desired; no buildings of severe aspect; no courtyards enclosed by four walls; no high enclosures; but everywhere possible, flowerbeds and shrubberies, light and air, in abundance.

M. Bouvard's work is extremely varied, and he does not disdain any subject. Thus, alongside the examples already spoken of and

FIG. 3.—ENTRANCE GATE, CARNAVALET MUSEUM.

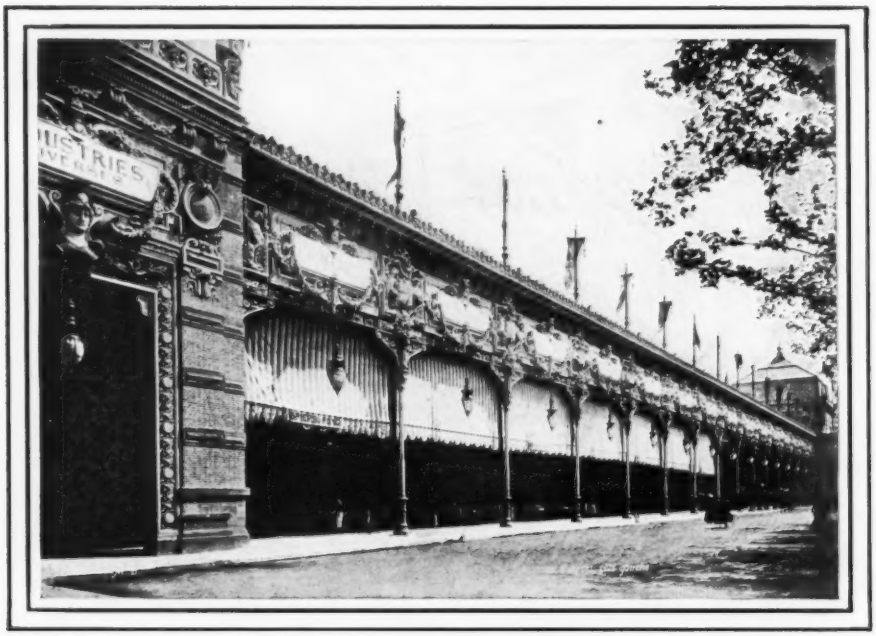


FIG. 4.—PALAIS DES INDUSTRIES DIVERSES, EXPOSITION OF 1889.

those described further on, we see him undertaking the reconstruction of the entrance-gate of the Carnavalet Museum.

The old Carnavalet mansion, which was occupied for some years by Madame de Sévigné and her daughter, Madame de Grignan, is the property of the City of Paris, which has transformed it into a museum intended to contain everything in the way of fragments of architecture, books, publications, and so forth, bearing on the history of Paris. The entrance-gate having to be remade, the task was entrusted to M. Bouvard, whose work was especially delicate from the fact that it was necessary to keep close to the sentiment of a piece of architecture which is regarded as a model of its kind. Consequently, the congratulations he received were all the warmer when it was seen that he had coped successfully with the difficulties of the undertaking. (Fig. 3.)

The Universal Exposition of 1889 furnished a further proof of the suppleness of M. Bouvard's talent, for there he was called upon, with the eyes of his master, M. Alphand, benevolently watching him, to design the Palace of Various Industries, and the much-admired Central Dome.

The Various Industries Palace (Palais des Industries diverses), of which Fig. 4 is an illustration, consisted essentially of a main building extending almost the entire width of the Champs de Mars,

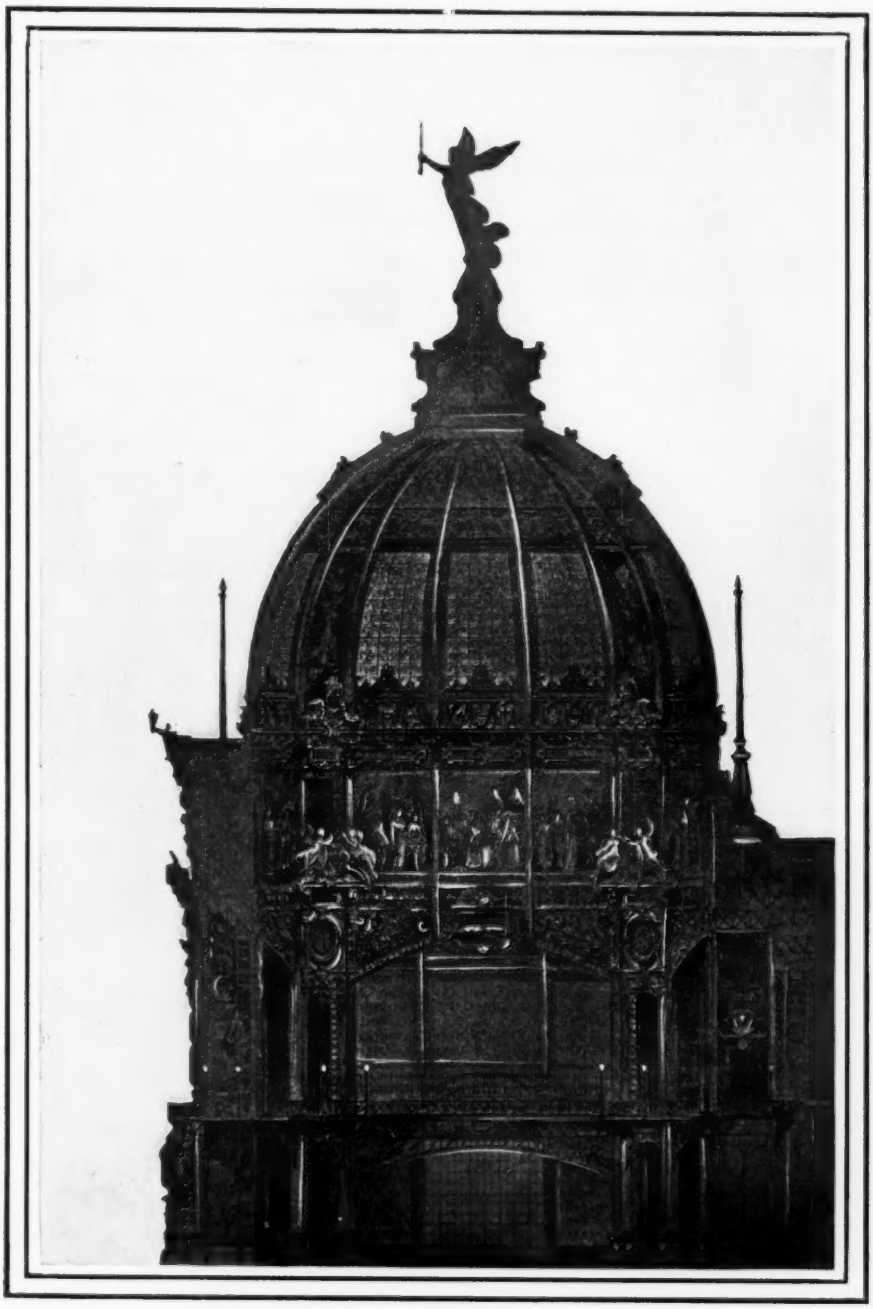


FIG. 5.—DOME OF THE PALAIS DES INDUSTRIES DIVERSES.

and two wings advancing towards the Seine. Its superficial area was 106,530 square meters.

The main building comprised:

1. A group of seven galleries of 25 meters span, parallel with the Seine on the Avenue de La Bourdonnais side.

2. A symmetrical group on the Avenue de Suffren side.

3. A gallery of 30 meters span, perpendicular to the Seine and situated between the two above-mentioned groups.

4. On the circumference, towards the Seine, the Avenue de Suffren and the Avenue de la Bourdonnais, galleries of 15 meters span, which formed a covered promenade by the upper garden and provided space for restaurants, cafés, etc.

At the Seine end of the Gallery of Thirty Meters was situated the Grand Central Dome, with pavilions adjoining, forming a monumental entrance and constituting a sort of pendant to the Trocadero. At the other extremity this Gallery ended in an immense staircase surmounted by a cupola of smaller dimensions than the Dome and giving access to the upper floor of the lateral galleries of the Machinery Hall.

The Gallery of Thirty Meters, situated in the axis of the Champs de Mars, constituted the great central artery of the Exposition. It was 167 meters long and extended over an area of 5,010 square meters. It produced a highly imposing effect.

The metallic frame of this gallery comprised seven girders, 25 meters apart, which figure equalled the span of the contiguous galleries.

The plan of the General Industries Palace, as first conceived, did not include any Central Dome, but simply a porch. It was, however, very soon recognized that a porch was not adequate, and that a more powerful motive was needed in order to give the palace relief and avoid its being dwarfed by the Machinery Hall, the Fine Arts Palace and the Liberal Arts Palace. It was, therefore, decided to erect a dome 65 meters in height and 30 meters in diameter.

As will easily be seen by referring to the illustration on page 299 (Fig. 5), access to this dome was obtained through a porch, which was flanked by two square towers and ornamented with a projecting balcony. On the right and left were two pavilions, each bounded by four pylons.

A balcony running round the interior of the dome at a height of 8 meters from the ground gave an opportunity of viewing the Grand Gallery of Thirty Meters, and the central part of the Machinery Hall on one side, and the gardens, the Fine Arts Palace, the Liberal Arts Palace, the Eiffel Tower and the Trocadero Palace on the other side.

The framework of the dome comprised eight principal half-trusses

FIG. 6.—DOME OF THE PALAIS DES INDUSTRIES DIVERSES.

extending from the ground to the summit of the cupola, a distance of about 60 meters.

The erection only occupied ten months. The Central Dome and accessory constructions required the use of 1,046,000 kilograms of iron, for a covered surface of 1,871 square meters. (Fig. 6.)

The Various Industries Palace differed greatly from the Machinery Hall and the Fine Arts Palace in the number of its galleries, the diversity of the objects it was destined to contain, and the various purposes which its parts were intended to fulfil. It was not associated with a single thought, like the said Hall and Palace; its form, style and decoration, instead of contributing to the expression of one idea, could, and in fact was bound to, interpret a number of complex ideas. Its scope was less limited, and left the architect much more freedom. (Fig. 7.)

There was another circumstance which tended to increase the independence of the architect and constructor. Whereas the idea of permanently retaining the Machinery Hall and the Arts Palaces had entered M. Alphand's mind almost at the outset, the Various Industries Palace, or at all events the greater portion of it, was doomed to disappear after the close of the Exposition. This ephemeral character of the edifice allowed M. Bouvard to give free play to his fancy, and to resort more than he would otherwise have done to flimsy materials, imitation revetments and modern processes of every sort.

The clever architect did not fail to avail himself of the latitude, both in conception and in execution, permitted in connection with the Palace which he was given to construct; he profited by it with intelligence and talent, in order to present to the public, not only something satisfactory from the point of view of taste, but numerous subjects for study as well; he profited by this latitude also to give as much prominence as possible to the various materials and modes of construction and decoration current at the present day, and to open up a field for experiments of an interesting character. In this respect his programme thoroughly responded to the purpose of the Exposition; and it responded also to the mission of the State, whose duty it is to encourage invention whenever the occasion presents itself, and to afford facilities for the bringing out of new creations.

The Exposition galleries properly so-called, that is to say the buildings destined to contain exhibits, were of the simplest character. They were nothing more than shelters covering the articles exhibited; the essential purpose for which they were designed was to provide convenient spaces capable of being easily subdivided. M. Bouvard carefully excluded therefrom all ornamentation of an encumbering nature, as this would have lessened the effect of the

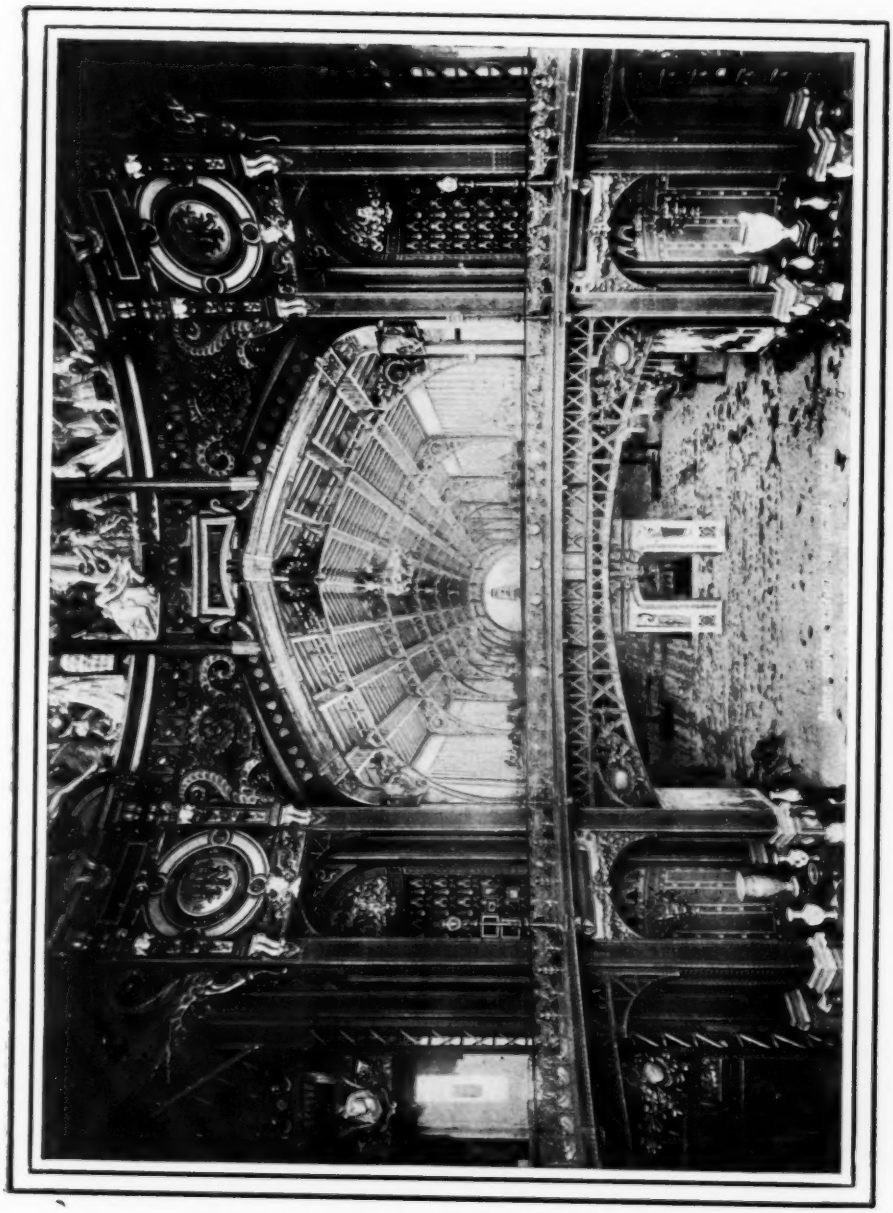


FIG. 7.—INTERIOR OF THE PALAIS DES INDUSTRIES DIVERSES.

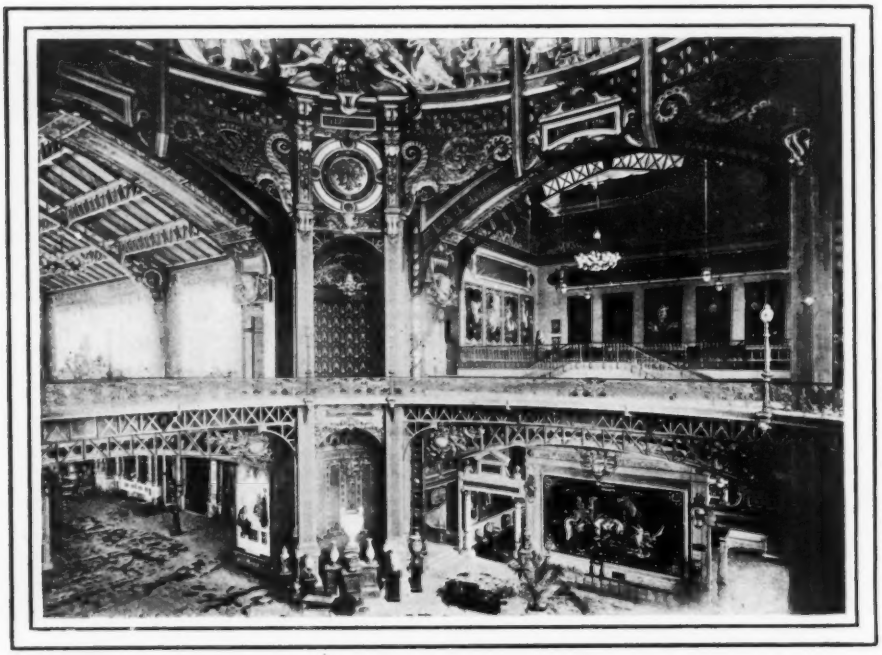


FIG. 8.—INTERIOR OF THE PALAIS DES INDUSTRIES DIVERSES.

exhibits themselves and interfered with the harmony of their arrangement.

The bulk of the decoration was concentrated upon the vestibules, promenades and principal galleries, or else reserved for the motives intended to contribute to the general effect of the edifices situated on the Champs de Mars. (Fig. 8.) Among these motives, the group at the porch or central vestibule of the Dome furnished the essential element of the internal and external decoration. The architect made this group a truly remarkable monument, dominating all the other constructions with those bold outlines which the use of iron renders feasible at the present day. Unmeasured praise was bestowed on the fine silhouette of the Dome and its elegant contour. The effect was especially pleasing during the illuminations, when lines of fire threw the figure of the Dome in strong relief against the sky.

The cupola presented a peculiarity worthy of notice. Instead of being lighted, as is customary, by a skylight turret, its upper part was solid, while its lower part was glazed between the trusses. Such an arrangement would be inapplicable to a stone edifice, but with metal it became both easy and rational. It had, moreover, the advantage of admitting daylight to the interior of the cupola under conditions which showed up its extreme lightness and set off its multi-colored decoration in the best possible manner.

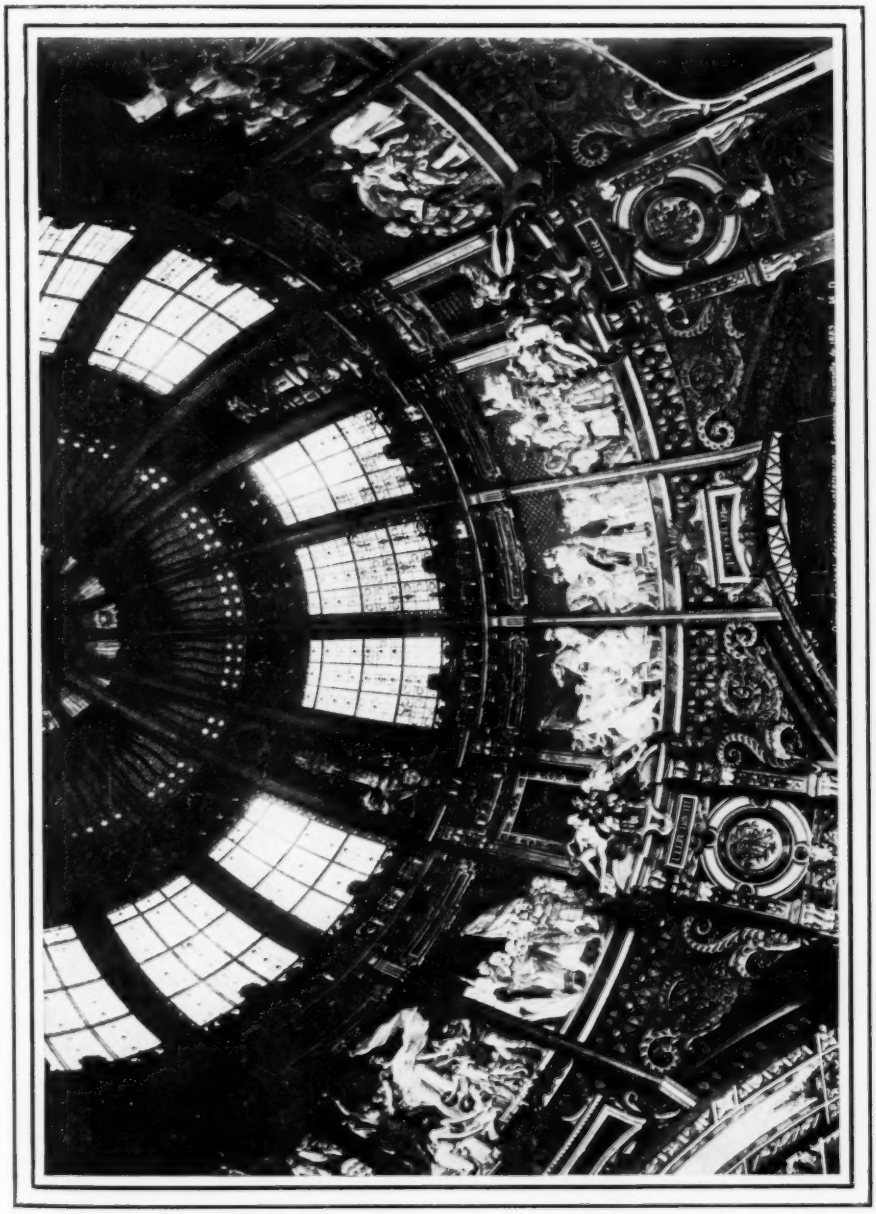


FIG. 9.—DECORATIONS OF THE DOME—PALAIS DES INDUSTRIES DIVERSES.

The Gallery of Thirty Meters, being the main artery of the Palace, called for a certain amount of ornamentation, and above all, had to be of noble proportions. M. Bouvard adopted the course of giving it considerable height and lighting it laterally by friezes of stained glass placed between its gutters and the roofs of the adjoining galleries. At the exits from the 25 Meter Galleries, monumental doorways, differing from each other in design, marked the respective classes and made the nave a sort of thoroughfare of national industry.

The Various Industries Palace and its Central Dome met with praise from all sides, and when, at the close of the Exposition, the Palace had to be demolished, care was taken to preserve the Dome and the Thirty Meter Gallery; and since then, until quite recently, visitors who contemplated the Champs de Mars from the vantage ground of the Trocadero were still able to form an idea of the splendid picture provided by M. Bouvard for the delectation of so many millions of citizens of all countries.

In 1878 M. Bouvard had been created a Knight of the Legion of Honor, and for his Central Dome he was rewarded with the Officer's Cross in that distinguished order. It was a well-merited recompense for the industry of an architect who, while achieving such results at the Champs de Mars, had found time to construct at the other end of Paris an edifice which subsequently was destined to acquire great notoriety. We refer to the Bourse de Travail, which was founded by the Municipal Council for the use of workingmen's organizations and which had afterwards to be closed by the Minister of the Interior, M. Charles Dupuy.

This establishment is situated near the Place de la République. It consists of an underground basement, a ground floor with partial entresol, and five stories above. (Fig. 10.) Its length is 36 1-3 meters, and it is 40 meters in depth. The principal departments are grouped around a central courtyard, whence they receive light, the irregularities of the perimeter, which is bounded by party walls, being utilized for the subsidiary services, exit staircases, water-closets, air shafts, etc.

Three large doors give access from the street to a spacious vestibule communicating with a gallery, which leads to all the ground floor offices and to the four staircases, by which the basement and the upper floors are reached. In the center is the large glazed courtyard, arranged as a hall for holding big meetings. The principal rooms are so disposed as to admit of their being thrown into this hall when special mass-meetings are held. With this object, the upper tier of seats is on a level with the floor of the periphery of the hall, whereas the middle is one meter below it. In the space thus enclosed between the tiers of seats and the true floor of the hall are

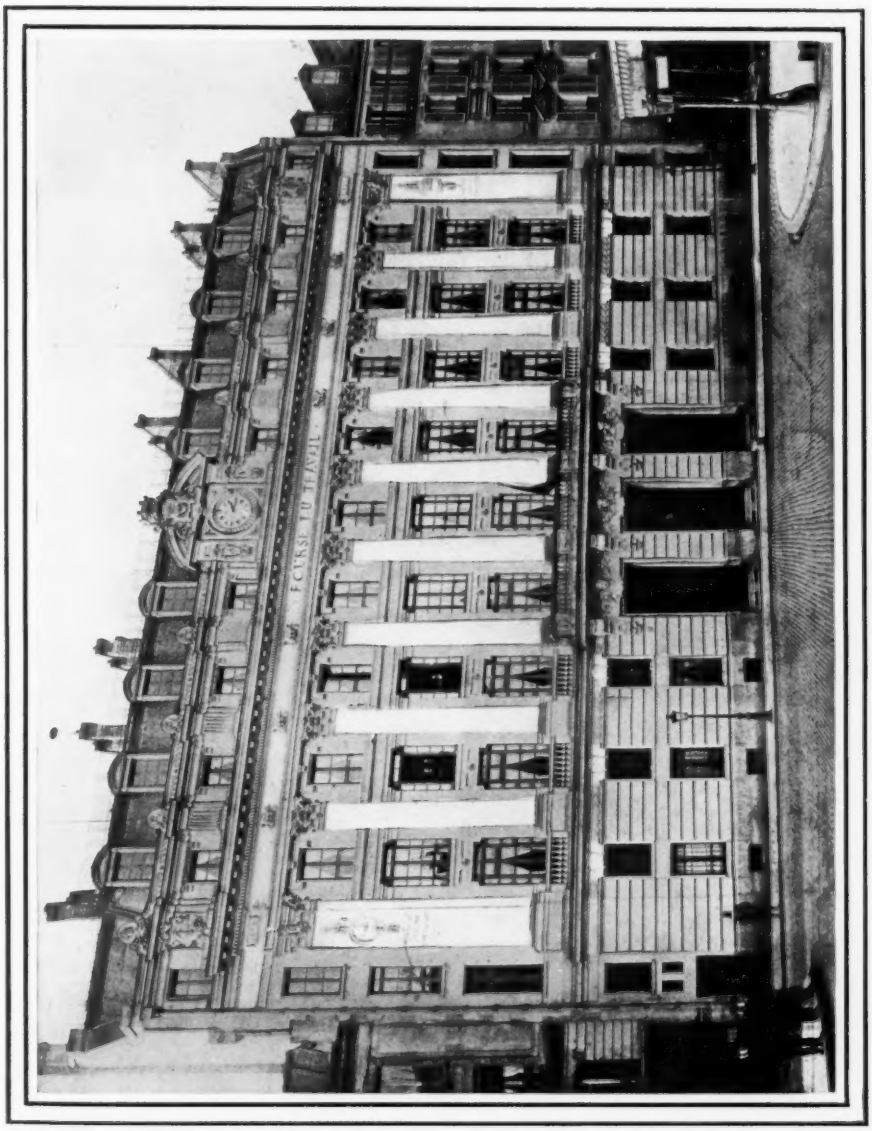


FIG. 10.—BOURSE DE TRAVAIL.

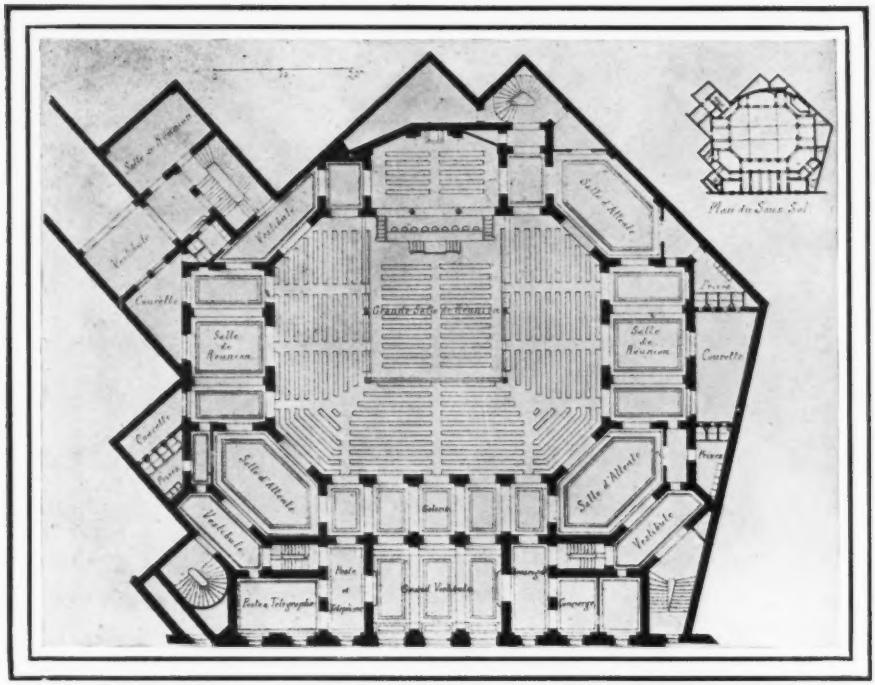


FIG. 11.—PLAN OF MEETING HALL, BOURSE DE TRAVAIL.

contained the heating, ventilating and other pipes. (Fig. 11.) The other premises comprise:

Sub-basement: Cellars, hot-air stoves, lighting and ventilating apparatuses; a large hall for holding strike meetings, with three small rooms annexed; four groups of closets, vestibules and exit galleries at the foot of four stairs.

First floor: Fronting on the rue du Château d'Eau, library, reading room and offices; the rest of this story consists of a committee room, a room for meetingfs, with anteroom, etc. A large gallery or corridor runs round the building and puts all the various services in communication one with another.

On the other floors: Four rooms for meetings or conferences and 132 offices for workmen's societies, corporations or syndicates.

In the beginning, the works were conducted with much precaution, on account of the troublesome nature of the subsoil, which contained a considerable quantity of water—a sort of subterranean river. It was necessary also to underpin the greater part of the party walls, they having little or no foundation. At this point of the city the ground has been found to comprise filling-up as far as 4 1-3 meters below the street level, then $1\frac{1}{2}$ meters of green mud, $\frac{1}{2}$ meter of greenish sand and gravel, 1 meter of fine yellow sand, and $3\frac{1}{2}$ meters of coarse gravel.

The Bourse de Travail rests upon 90 shafts varying in section from 1.90m to 4.90m, according to the weight they have to support, and filled with a concrete formed of stones and a mortar made of Portland cement. These pillars are connected together by arches made of limestone and the same kind of mortar as was used for the pillars.

The large central courtyard, which is 24 meters long, 19 meters wide and 7½ meters high to the gutter, is covered in by a glass roof resting on an iron frame without any interior bearing points. It is capable of containing 1,500 persons, and, as we have already stated, can be enlarged by the addition of the smaller halls which surround it. The floor is made of iron, with glass pavement in the center in order to give light to the strike hall beneath. All the other floors are likewise of iron.

Every floor is provided with water, electric light, telephone, fire extinguishers—in a word, everything necessary for the efficient working of a great public establishment containing in a relatively small space a number of important departments.

The ground, which was purchased by the City, cost 1,010,000 francs. The expense of construction, fitting up, and furnishing, amounted to 1,920,000 francs, say $586,000 altogether.

It was a further notable achievement for M. Bouvard to have succeeded in erecting a public edifice of such a character at a cost not exceeding that of a large apartment-house.

This article would be incomplete if, before showing M. Bouvard in his role of decorator of the City and organizer of all the grand fêtes, we did not say just a word concerning the Municipal Disinfecting Ovens which have been built after his plans, in the rue des Récollets, near Saint-Martin's Canal.

This establishment is arranged in a most ingenious manner, and the architect has strictly followed the programme laid down. There is a complete separation between the articles to be disinfected and those already purified. The establishment has two doors: one for bringing in the infected articles, opening on to the arrival courtyard, and the other for the removal of the disinfected articles, which opens on the departure courtyard. All contaminated articles that are transportable are brought to the stoves in air-tight conveyances. The articles are immediately disinfected and then carried back to the house whence they came in different conveyances and by different men from those which brought them. After each operation, the conveyance used for transporting the infected articles undergoes disinfection. Furthermore, the employees whose duty it is to manipulate the infected articles are forbidden to come in contact with their other colleagues, until they have changed their clothes and cleansed themselves in a special manner. In order to enforce this, they are

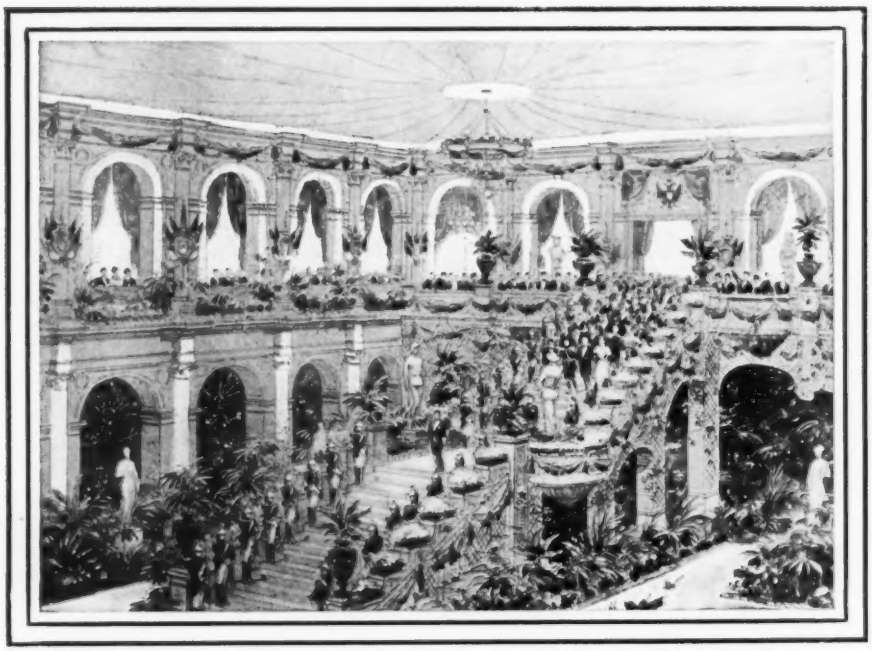


FIG. 12—IMPROVISED STAIRWAY IN THE COURTYARD OF THE HOTEL DE VILLE.

precluded from leaving the premises where they work except by passing through two rooms, a dressing room and a lavatory, each of which is provided with two doors, neither of them opening until the other has been closed by means of an automatic contrivance.

The Paris Municipal Disinfecting Ovens are considered by all hygienists to be perfect examples of such establishments.

It is certainly remarkable to see that an architect who is able to organize such a prosaic establishment as the above, even its smallest details, is equally capable, when required, of transforming himself into a clever scene-setter and giving an artistic stamp to the embellishments (sometimes ephemeral ones) of the city. This invaluable aptitude has displayed itself on two occasions in particular, viz.: in the month of October, 1893, when the Russian Admiral Avellan came, and in 1896, when the Russian sovereigns visited Paris.

In 1893 it was a veritable scene from fairyland which presented itself to the countless multitude of people assembled in front of the Hôtel de Ville. Among the most pleasing of the motives were two ships, designed by M. Bouvard. Their hulls were formed of a series of reddish imbricated scales, and at the bows there were two gilded hawse-holes. A pair of Tritons, symmetrically placed, were blowing two golden horns; above them were two mythological figures of sea-gods. At the stern of the Republic, in a white robe and a dark

blue mantle, reared herself proudly on a rounded socle. Her bare feet resting on the azure sphere, sent forth golden rays. Her right hand was lifted to the height of the horizon, while her left arm, stretched towards the sky, brandished a torch and a sun-colored pendant. The after part of the ship bore two escutcheons with the city arms on them, and represented the poop of a vessel. The ship was flanked on the right and left by pylons supporting immense shields with the Russian arms on them. Around these pylons were maritime engines bearing commemorative inscriptions.

On board these ships were orchestras and choirs, which discoursed an admirable programme of music while the banquet of 600 covers,

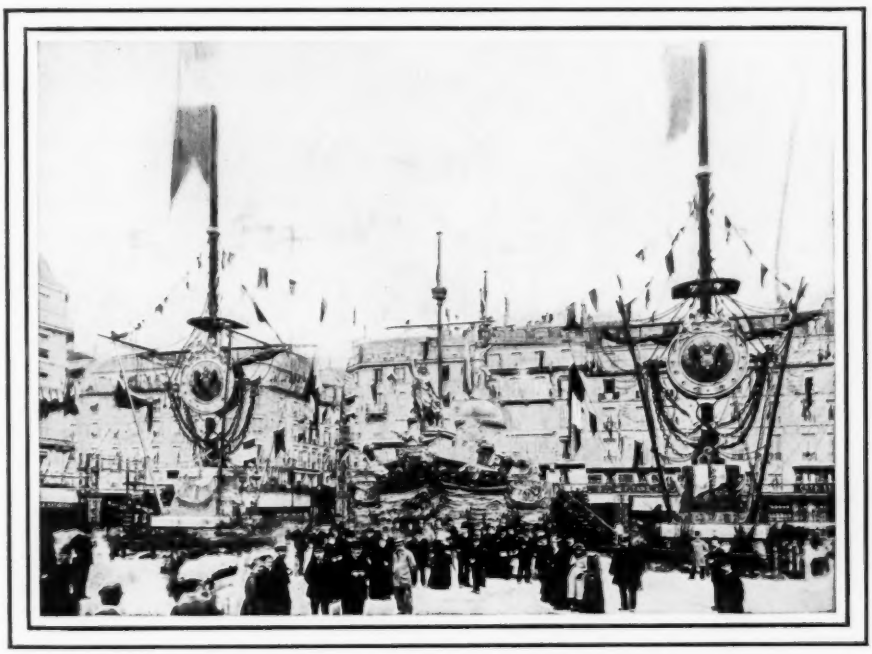


FIG. 13.—DECORATIONS IN THE SQUARE OF THE HOTEL DE VILLE.

presided over by M. Carnot, was taking place inside the Hôtel de Ville.

At half a score of other points in Paris M. Bouvard gave proofs of the versalitity of his imagination, and the luminous pylons which he installed on the Place de l'Opéra, near the Military Club, where the Russian officers were lodged, elicited unbounded admiration from the vast crowds which congregated at that spot.

In 1896 it was again at the Hôtel de Ville that M. Bouvard distinguished himself. He surpassed all his previous efforts by the magnificent display which he prepared for the occasion of the reception of the Russian rulers. Within the Hôtel de Ville there was an

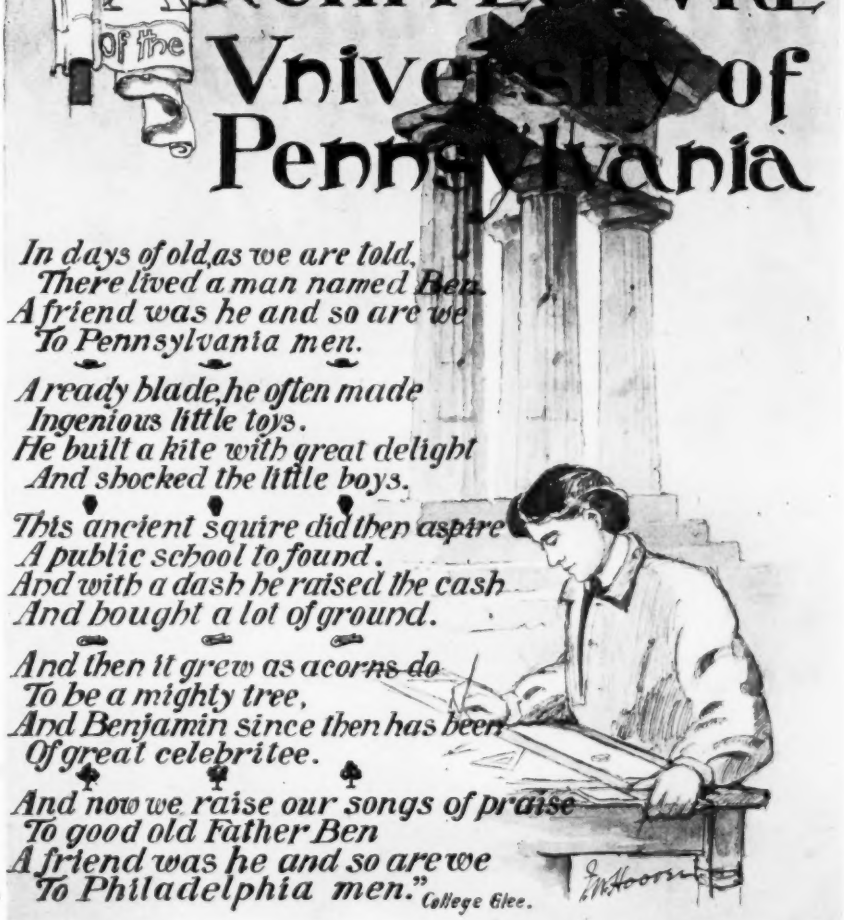
unprecedented profusion of lights and flowers. A grand staircase was improvised in the great central courtyard, in order that the illustrious visitors might proceed direct to the hall where stood the monumental vase presented to the City by the Tsar Alexander III. (Fig. 12.) Outside M. Bouvard confined himself to garnishing the principal entrance with a rich awning, so as not to disfigure the fine façade of the edifice by overloading it with ornamentation. On the square, in front of the building, two hemicycles with elegantly designed colonnades were erected for the choirs. At the corners of the square rostral columns, with the city arms, and masts entwined with flowers and surmounted by the imperial eagle, completed the decoration. (Fig. 13.)

Throughout Paris evidence is to be seen of his handiwork, sure and yet light. It is he who conceived the delightful notion of putting flowers around the trees at the Rond-Pont of the Champs-Elysées. The decoration of that avenue, the Place de la Concorde, and the Terrace of the Tuileries was also effected by him.

The Government, urged thereto by public opinion, has recently set a new seal upon M. Bouvard's reputation by conferring on him the grade of Commander in the Legion of Honor. This is probably not the last distinction which will be bestowed on this gentleman, who, in the midst of his heavy labors, is always urbane and good-humored.

René de Cuers.

THE SCHOOL OF ARCHITECTVRE of the University of Pennsylvania



In days of old as we are told,
There lived a man named Ben.
A friend was he and so are we
To Pennsylvania men.

A ready blade he often made
Ingenious little toys.
He built a kite with great delight
And shocked the little boys.

This ancient squire did then aspire
A public school to found.
And with a dash he raised the cash
And bought a lot of ground.

And then it grew as acorns do
To be a mighty tree,
And Benjamin since then has been
Of great celebritee.

And now we raise our songs of praise
To good old Father Ben
A friend was he and so are we
To Philadelphia men." College Glee.

COLLEGE HALL, UNIVERSITY OF PENNSYLVANIA.

ARCHITECTURAL SCHOOLS IN THE UNITED STATES.

University of Pennsylvania.—No. 2.

IT is unlikely that good old Dr. Franklin, farsighted philanthropist that he was, ever dreamed that the Charitable School founded in Philadelphia in 1740, raised to the dignity of an Academy in 1753, elevated to a college in 1755, and amalgamated in a university in 1791, would one day comprise upwards of thirty large buildings occupying some sixty acres of land, and would expand to seven great divisions whose combined enrollment amounts to nearly three thousand students at the present day. Probably all that Dr. Franklin had in mind when he wrote his pamphlet entitled "Proposals Relative to the Education of Youth in Pennsylvania," was to free his Charitable School from the load of debt that it was struggling under, to obtain for it a charter, and to establish it upon a sound educational and financial foundation. He builded better than he knew. As the song hath put it, the acorn grew until it became for all time the pride and glory of the great State of Pennsylvania, whose name it bears.

The last department that was added to the University of Pennsylvania, and the one, perhaps, farthest from the thoughts of the celebrated Doctor, is the School of Architecture. This course comes under the head of the Towne Scientific School, which latter, together with the School of Arts, is included in the college division proper of the University. Thus the quarters of the School of Architecture are situated in College Hall and the school is governed by the rules and regulations that apply to the various departments in that building. The origin and growth of the University of Pennsylvania's School of Architecture well illustrate the need which the members of the architectural profession in Philadelphia felt for means by which young men of that vicinity might receive systematic and comprehensive training in architecture, and also the deep interest which said members took in the effort to establish such a school. At the instigation of the Philadelphia Chapter of the American Institute of Architects a committee was formed about a dozen years ago for the purpose of devising ways and means for providing architectural instruction in that city. The most feasible thing to do seemed to be to confide the infant project to the protecting and powerful wing of the great University in West Philadelphia. Accordingly, in the year 1890, we find the chairman of the said committee, Mr. T. P. Chandler, Jr., supervising in a necessarily modest way lectures and instruction in architecture upon the top floor of the College Hall Building at the University. At the end of the first year the Chair of Architecture was established by the trustees, and Warren Powers Laird, who had been called from abroad during that year to take charge of instruction, was elected to fill it. Professor Laird's first associates in the school were Charles E. Dana, the well-known water colorist, and Julian Millard. By 1893, the school had already grown to such proportions that special instructors in design, ornament and free hand, namely, Edgar V. Seeler, Herbert E. Everett and George Walter Dawson, were added to the staff. The presence of these men materially strengthened the æsthetic quality of the school's influence—a quality unmistakably in evidence from the first. It was manifestly the policy of those responsible for the school's interest to not merely make the various branches of free hand work incidental to the study of design, but to give each one an individual importance primarily for its own sake, and ultimately for the sake of the broadest artistic development of the architect and man. To this end the instructors in the essentially æsthetic branches of the course have been chosen particularly for their recognized abilities as artists in their respective lines. As the school grew this policy was consistently maintained, as shown by the appointment of Wilson Eyre as instructor in pen and ink, and his successor, Frank Allison Hays,

From a Wash Drawing.
School of Architecture, University of Pennsylvania.

and also by that of Edmund Stewardson and his successor, Henry Plasschaert, as instructors in modeling. The personalites of these various art instuctors have created a strong artistic atmosphere about the department, which hence savors of a Fine Arts School in spite of the disadvantages of inadequate facilities which all such schools invariably meet with in their early years. It is this enthusiasm for art, generically speaking, which the instructors of the school seek to inspire in the students and also the prominence given to art instruction, specifically speaking, that, undoubtedly, are the most potent reasons of the school's success. An examination of the circulars of information issued every year by the Pennsylvania School of Architecture reveals some interesting data concerning the time which is devoted to these various art subjects. Allowing for the slight changes that occur from time to time in the course, it is found that an average of seven hours per week, during the last three years has been prescribed for work of this nature.* This time has been divided as follows: Pure freehand drawing from cast, antique, nature and life, four hours; water color, three hours (during two years); and pen and ink rendering, two hours (for one year). This time is entirely distinct and separate from the still greater portion devoted to what might be termed incidental freehand work, such as the varied pen, pencil and brush exercises in connection with Freshman Architect-

*There is also offered, as optional work, two hours in modeling (all classes) and one of pen and ink rendering (seniors and second year specials).

ural Drawing, Architectural History, Historic Ornament, Design, Summer Work, etc. The following table will illustrate more concisely the allotment of time to the various subjects in the Junior year:

SUBJECTS.

Freehand.—Pure freehand drawing, pen and ink rendering, water color drawing; hours per week.....	9
Engineering.—Mechanics and graphics, building construction, heating and ventilating, plumbing and drainage; hours per week.....	5
History; hours per week.....	3
Design; hours per week.....	15

To show the characteristic insistence with which the school demands that its students shall learn to draw, and not only that, but also that they shall be accomplished draughtsmen, the present fifth year or Post Senior course is herewith tabulated:

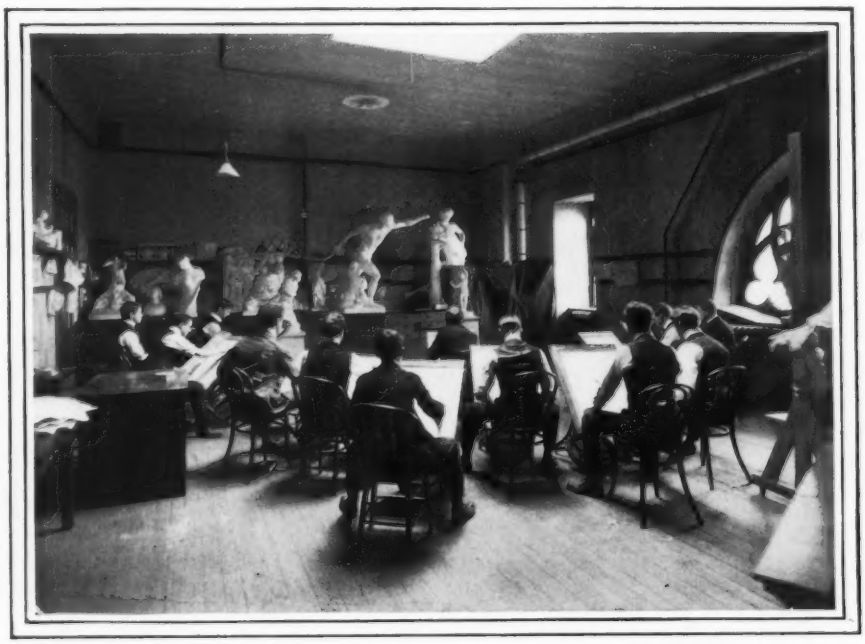
Antique.....	Four hours per week.
Water Coloring Rendering.....	Six hours per week.
Ornament.....	Nine hours per week.
Design.....	Thirty hours per week.

In thus endeavoring in so impressive a manner to cultivate and train the eye and the hand of the student to the end that he may be able to express his architectural knowledge, not only properly and adequately, but artistically to a degree, in brief, in thus aiming to make the name architect a synonym for artist in the largest sense of the word, Pennsylvania's School of Architecture has made for itself a very high and by no means simple standard of attainment. How far the school has succeeded is a matter of vital interest to everyone concerned in the education of the architect. It will answer the question: how far is it possible to make an artist of a man by a four years' course in architecture, about one-third of which is necessarily given to liberal and scientific studies that have little or no relation to the arts? The work of the men both during the course and in after years obviously is the best criterion of a school's worth. This does not apply to the naturally talented students, some of whom are usually found in every class and who would make a good showing under any conditions, but to the rank and file, who, before entering college, were totally unpractised in drawing. These are the men whose work forms the real test of a school's strength. The helplessness of the student in the first stages of learning to draw calls for something more than the instructor's mere technical skill to overcome; it calls for tact, encouragement and stimulation, besides unlimited patience. Almost any mathematician can teach mathematics, but it is not every artist that can successfully instill

artistic sense into a class of rollicking college boys. Whatever measure of success therefore be granted Pennsylvania's School of Architecture must be ascribed largely to the personalities and skill of the instructors. The accompanying marginal illustrations are from examples of the student's work in freehand and kindred subjects, picked out almost at random from the collection in the department shelves. Concerning the work of the men after graduation more will be said below.

From a Pencil Drawing.
School of Architecture, University of Pennsylvania.

A great deal might be written concerning the value of freehand drawing in the education of the architect. Its most obvious and practical use is in enabling the draughtsman to express his ideas



FREEHAND ROOM, SCHOOL OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA

with accuracy and facility. For preliminary illustrative sketches, designing ornamentation and drawing out large scale details, skill

in freehand is invaluable. Obviously the more a draughtsman studies his design, the more likelihood is there of its constant and satisfactory development; and by studying is meant the unsparing use of pencil and tracing paper. The draughtsman who is not embarrassed by a lack of facility with his brush and pencil will, other things being equal, make more studies of his work, thus developing more thoroughly the possibilities of his design than he whose draughting is crude and labored. It is true that "other things" are not always equal. Instances are not wanting wherein a clever draughtsman and beautiful renderer has turned out work of which the artistic appearance is entirely disproportionate to the way in which the requirements of the problem have been met. In these cases, however, the men are almost invariably naturally talented artists, and such men are not always disposed to sacrifice for the practical and prosaic their opportunities to produce artistic effects. The fact that extremely clever draughtsmanship may become a dangerous tool in the hands of the young architect is not a valid reason for questioning the merits of the Architectural Course under consideration. The great majority of architectural students undoubtedly need all the freehand training they can possibly get.

But a deeper import than any of the things mentioned is given to the studies of pure drawing at the University of Pennsylvania. This is the training of the perceptive faculties, i. e., the powers of observation and mental retention. The creative ability of an architect must depend first upon his resources gained through observation of architectural forms. The student confronted by his first problem in design naturally employs the simple classic forms which he has just made his own. They are his entire stock in trade at the beginning—the first evidences of architectural language which his tender experience can produce. Like an infant learning to talk, his first forms of expression will be those that have been dinned into his ears the most incessantly, and his progress in fluency and resourcefulness of speech will be directly as the cultivation of his faculties of observation. Freehand drawing trains the eye to discern and study the main as well as the most subtle distinctions in form, proportion, color, light and shade and texture. It trains the mind to memorize what the eye has observed, and to make the knowledge its own. It induces the habit of photographing upon the eyes' retina, so to speak, all forms that may be of value to the student's mental storehouse of architectural knowledge. This storehouse, or mental sketch-book of an architect is exactly similar, relatively speaking, to the mental note book of an author. In literature, the faculties of observation are, perhaps, even more imperatively called into requisition than in architecture, and there is included in the training for the former profession no course of study, which in its

Wash Drawing from Nature (Summer Work). School of Architecture, University of Pennsylvania.

value for strengthening such faculties, can be compared to the influence of freehand for a like purpose in the education of the architect. The time is very recent when these facts even began to be understood in this country. As Ernest Flagg in a recent article for this magazine said: "In the past almost every young American as soon as he is able to draw a straight line has felt himself competent to undertake any work of architecture, and not only that, but he has found that most people have been ready to agree with him in his way of thinking." There is still a great degree of ignorance among people generally concerning the nature of a thorough course of architectural training, and also of the true lights by which this greatest and most public of the fine arts is esteemed by those who profit most from its study. The majority of laymen, while admitting the necessity of the architect as a designer of safe and proper construction, and one well versed in the most approved use of historical and conventional architectural forms, fail to appreciate the aesthetic motives which influence the architect's work. Particularly is this so when clients who think that they know what they want impose conditions upon the architect that were never included in the wildest imaginings of his instructors in design. As Mr. George B. Post recently said to the writer: "The anomalies which are seen upon the facades of our buildings, and which are perfectly evident to every architect, are too commonly singled out as the special instances of their author's lack of knowledge and taste, without due consideration to the parts which the clients play in these matters. If architectural critics would take a little pains to post themselves more fully concerning the *history of the design* of any building, their criticisms of the same would have an added value and interest." As an influence upon the public taste and appreciation in architecture, our architectural schools of the United States are doing noble work. It seems apparent that the more successful a school is in imbuing its students with the idea that to be architects they must be artists, the greater this influence will be.

At the University of Pennsylvania, freehand drawing proper is begun in the second year under Mr. Dawson. The work at first consists of brief studies in pencil of groups of simple geometric forms. These groups are changed about every fifteen minutes or

FROM A CHARCOAL DRAWING.

School of Architecture, University of Pennsylvania.

so, the idea being to train the student at the start to grasp the main elements of the composition rather than to spend valuable time upon less important details. Later on in the year charcoal is used as a medium, and shaded drawings from casts more carefully made.

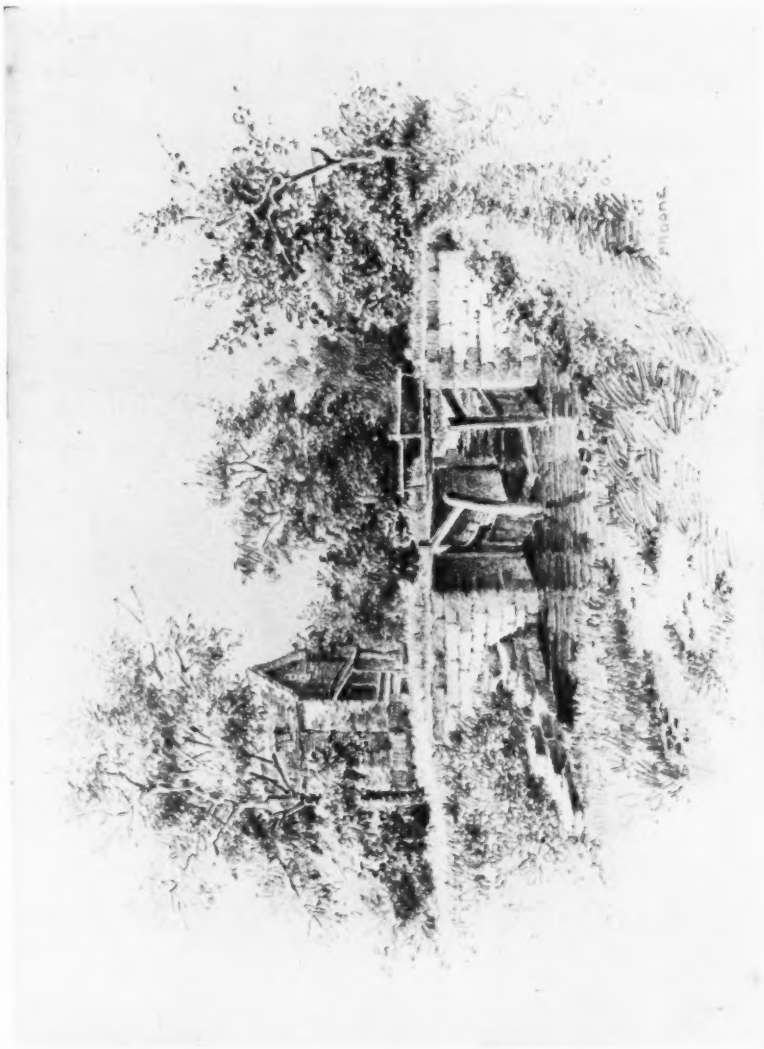
From a Charcoal Drawing.
School of Architecture, University of Pennsylvania.

latter including time sketches of heads (one of the students usually posing for the class) and drawing of the nude, a professional model being secured for the purpose. The summer work prescribed for the students consists of twenty-four carefully made sketches from nature. These may be rendered in any medium and be of any description. In lieu of the sketches, twelve weeks' work in an architect's office may be chosen. Water color drawing is taken up in the third year under Mr. Dawson, some previous preparation for this work having been gained in the first and second years by practice in graded washes, rendering of the problems in shades and shadows, composition, etc. Very much the same policy is pursued in this subject as in free-hand drawing, the work at first being studies of simple colored

Here again, however, the principal values only are studied at first, the student being urged to "block in" the shadows in two or three tones. In the third and fourth years, drawings from the antique and life are successively taken up under Professor Everett, the work in the

Water Color Work.
School of Architecture, University of Pennsylvania.

objects, and intended to give the student a "feeling for color" and confidence with the brush. In the latter part of the year some work from nature is done in the country about West Philadelphia, the greatest liberty being allowed the student



PENCIL SKETCH FROM NATURE (Summer Work).
School of Architecture, University of Pennsylvania.

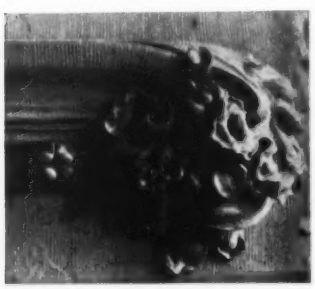
in his choice of subjects. In the fourth year Mr. Dana takes charge of the class, and work of a much more advanced character is done. The enthusiasm which the men display over their water color work of this year is the best proof of their success in learning to handle this most elusive and difficult but architecturally effective medium. In the third year pen and ink drawing is taken up under the leader-

Water Color from Nature.
School of Architecture, University of Pennsylvania.

ship of Mr. Hays, a well-known architect and pen and ink artist of Philadelphia. After a few lessons spent in acquiring a good quality of line, the students practice rendering from plates and photographs contained in a work prepared especially for the purpose by Mr. Hays and Arthur Spayd Brooke, a former student of the school. Two hours per week for one year under Mr. Hays graduates the student in pen and ink, and prepares him to do work of the quality shown by the accompanying illustrations.

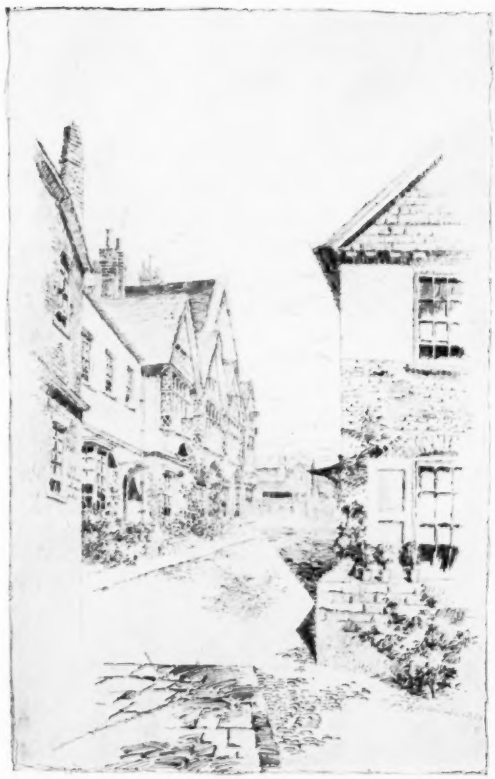
Work in modeling is superintended by Mr. Elliott, a recent graduate of Columbia University's Architectural School, and now instructor in architectural drawing of the first and second years. Mr. Elliott has introduced a new feature in the modeling course in this school, namely, the modeling, at a small scale, of large architectural designs. The models of some of the New York City skyscrapers shown at the recent Paris Exposition, and the modeling work of that nature that has been found necessary for our coming Pan-American Exposition at Buffalo, suggests the value of Mr. Elliott's idea.

Pen and Ink Work.
School of Architecture, University of Pennsylvania.



Modeling in Clay.
School of Architecture, University of Pennsylvania.

The preparattion for the work in Architectural Design in this school extends over the first year through the medium of simple problems accompanying the studies in Orders and Elements. These are taken up in detail and with great thoroughness, Professor Laird describing the forms and their characteristics in illustrated lectures. The students make notes of these



Pen and Ink Work.
School of Architecture, University of Pennsylvania.

lectures and are afterwards provided with blue prints of the Elements and Order plates. The latter are committed to memory to the smallest detail, frequent quizzes being held to test the student's knowledge.

In the sophomore year the study of design proper is taken up, the first one or two problems being rendered in India ink, and the later ones in color. In these problems the students are drilled in the principles of proportion and composition, five-hour sketch problems being given to develop quickness in design and rendering. In the third year, problems of increasing difficulty are given, the regular monthly designs being interspersed with sketch problems of a few hours only. Fifteen hours per week are given to this work in the third year and twenty-eight hours in the fourth year, the latter half of the senior year being devoted to the theses. The two higher classes in design were in charge of Mr. Edgar V. Seeler, the well known architect of Philadelphia, from 1893 to 1898, when the rapidly increasing extent of his professional work necessitated the severing of his active connection with the University, much to the regret of the students and officers of the school. He was succeeded by Frank E. Perkins, Architecte Diplômé par le Gouvernement Français. The natures of the problems in design given vary from the extremely practical to the imaginary. They embrace almost every kind of private and public building that can be found in and about the City of Philadelphia (except the skyscraper, we have not seen an example of this), as well as many others of more exceptional nature given principally to stimulate the imagination and to cultivate the broadest architectural sense. The greatest freedom is

allowed the student in his choice of styles, although classic forms naturally predominate. He is encouraged to amplify and develop the original scope of a problem and above all to make his design his own from the preliminary sketches straight through to the finals. He soon learns the fallacy of the idea that the short road to success in the study of Architectural Design lies in the ability to make a successful "swipe" from some plate or photograph in the library. At the same time the importance of the library for historical study

THE DEPARTMENT LIBRARY.
School of Architecture, University of Pennsylvania.

and research is continually impressed upon the student throughout the course.

This delightful room, with its equipment of 10,000 plates and photographs and 600 volumes, files of art periodicals, etc., is always accessible, even during the preparation of the preliminary sketches (except in the case of the Scholarship Competitions).* Recently

*The John Stewardson Traveling Scholarship in Architecture awards one thousand dollars annually for travel and study abroad. Preliminary examinations in Construction, French, Architectural History and Drawing test the fitness of the candidate to enter the competition whose outcome is based upon a more or less elaborate problem in design. The fifth award will be made this winter. A University scholarship of the same character preceded the founding of the Stewardson and was awarded through four years. Competition is open to all Pennsylvania draughtsmen of one year's experience in the state under the age of thirty.

The Arthur Spayd Brooke Memorial Prize (fifty dollars money value) is awarded to that student whose standing for the year shows the highest general excellence. In estimating this merit there will be observed the university ideal of scholarship which attaches no less importance to breadth of general development than to the simple acquisition of knowledge, and requires that to extract all possible good from his university surroundings a man must give the best of himself to his Alma Mater.

a very comprehensive system of card catalogues has been introduced in the library by its curator, Mr. Osborne. By its means everything that the shelves contain, whether relating to a particular style of architecture, to a certain period of time, or to a special locality can be picked out at once. Mr. Osborne, who succeeded Mr. Pilcher (another graduate of Columbia University's School of Architecture), as instructor in Architectural History, has also instituted some changes in the latter course, tending to make it more distinctly a course explanatory of the place and significance of architecture in history. The treatment of the subject from this point of view is undertaken for the especial purpose of widening the student's horizon beyond the bounds of the purely technical side of his profession, and leading him to properly estimate the relative position and meaning of all the other subjects in his course. To this work three hours per week are devoted during the first three years, of which time one-third is taken up by lectures and two-thirds by research.

One of the most interesting courses of study in Pennsylvania's School of Architecture is that known as Historic Ornament. Nine hours per week may be given to this subject, as an elective, in the fourth year, while two hours per week throughout the third year of drawing in the form of Historic Ornament are required. It is in charge of Mr. Herbert E. Everett, who also conducts the Three-Year Special Course in Interior Decoration.* This study of His-

A Spandrel in Byzantine Mosaic. Historic Ornament. School of Architecture, University of Pennsylvania.

*Independently of the course in Architecture, but correlated to it, there is conducted at Pennsylvania a three-year course in Interior Decoration. This is one of the few courses in the University open to women, and is probably the only course of its kind offered in a University, with the possible exception of one in Tulane University, New Orleans, and one in the University of California. It is a purely professional course, and in it students are taught not only to apply color and ornament to the decorative treatment of flat surfaces, but also to design forms as well. Special attention is given to the designing of furniture and smaller objects which are allied to architecture, and to the artistic conception and arrangement of interiors.

The professional success of the graduates from this course has fully justified its position in the University curriculum.

toric Ornament is a most valuable adjunct to the study of Architectural Design. Besides giving the student a practical working knowledge of every style of ornament from ancient Egyptian to modern renaissance, it affords the best possible training in the design and juxtaposition of colors in architecture. In some respects it is the most distinctly aesthetic work that is done in the school. The problems in design that are given every week offer the widest field for the exercise of the student's artistic fancy. If the latter occasionally runs riot, resulting in productions that for gorgeousness of coloring might be likened to a flaming sunset, there is likely to be less censure than humor in the criticisms. Owing to the extent of the ground covered, the students are rarely able to make completed drawings of their designs, although occasionally a man may be found in the draughting-room late at night finishing some favorably criticised piece of work that he has fallen in love with. In the decorative field which the course covers are included problems in designing wall decorations, stained glass, furniture, ornamental ceilings, and iron work, etc.

Design for a Garden Seat. Historic Ornament. School of Architecture, University of Pennsylvania.

The studies in Architectural Construction and Practice are in charge of Mr. Thomas Nolan, an architect of wide experience and formerly Professor of Architecture in the department organized by him in the University of Missouri, a position from which he was called by the University of Pennsylvania. Mr. Nolan also is a graduate of the Columbia University's Architectural School.

Incidentally, it is worthy to note that this grafting of Columbia as well as other* stock, so to speak, upon Pennsylvania's architectural tree of knowledge has naturally had noticeable effect upon the fruits thereof. The influence which that wise head of the former school exerts upon architectural education extends far beyond the

*Several members, past and present, of the Corps of Instruction of the Univ. of Penn. Arch. School have come from the Mass. Inst. of Technology.

walls of his own great institution. Which is as it should be. Our Architectural Schools are like the students in a course of architectural design. Each one is working independently and along its own lines, but all are in active sympathy with each other, for all are striving for essentially the same goal. The good things are passed around as far as they will go, and each one digests them in his own way.

After the courses in Chemistry and Physics, Algebra, Plane Trigonometry, and Analytic Geometry have been completed at the end of the second year, lectures in Mechanics of Materials, Graphic Statics, Building Construction, Sanitary Engineering of Buildings and Hygiene are given. These subjects are all disposed of in the third year with the exception of Building Construction, to which one hour per week is devoted in the fourth year also.

An interesting and valuable feature introduced by Mr. Nolan in connection with the work in Construction, is the practical and immediate application of the student's investigations in these studies to the current problems in design. The application of this idea to the work of the upper classmen results in giving an increased interest to all three subjects of Construction, Materials and Design, and in making more real their correlation and inter-dependence.

Memorial Tablet. Interior Decoration. School of Architecture, University of Pennsylvania.

The liberal studies which the students take in the first two years in common with the men of other departments of the College proper, are Rhetoric and Composition, English Language and Analysis, Modern Novelists and Essayists, French or German.

Next in importance to the regular four-years' course, in regard to the number of students enrolled, and quite equal to it in regard to the quality of the work done, is the two-year special course in Architecture at the University of Pennsylvania. Admission to this course requires a certain general educational fitness, estimated on such records as the applicant can present either at entrance or before the full work of the course can be taken and its certificate received. Examinations in algebra, plane and solid geometry and in freehand drawing must also be passed. This course is thoroughly well suited to draughtsmen who desire a

short and compressed technical training in architecture. In order to place the specials upon the same footing in design as the regular students before the completion of their respective courses, a rigorous curriculum is, of course, necessary. As will be seen by the following table, the first year specials perform a large share of the work that in the regular course is spread over the first three years.

TWO-YEAR SPECIAL COURSE.

Subjects—First Year.	No. of hours per week— 1st term.	2d term.
The Five Orders and Elements of Design (lectures)	3*	..
The Five Orders and Elements of Design (drawing)	12*	..
Archaeology	3†	3†
Shades and Shadows	3	..
Perspective	..	3
Rendering	15‡	..
Order Problems	..	15§‡
Design	..	15*
Freehand Drawing (Cast. and Hist. Orn.)	4	4
Pen and Ink Rendering	2	2
Water-Color Drawing	3	3
Mechanics of Materials	3	..
Graphic Statics	..	3
Building Construction	1	1
Hygiene, 10 weeks; Sanitary Engineering of Buildings, 20 weeks.	1	1

*Major part of term. †Elective as substitute for 9 hours in Design. ‡Minor part of term. §One hour lecture; 2 hours research.

They are enabled to pull through the heavy waters of this year by reason of their previous practical experience and the confidence that it gives them. They even manage to indulge in a little football besides! But not much. Time that is taken off for athletics, or anything else for that matter, must be made up; and that means night work. Now, it is known that some kinds of work cannot be so well done at night, as, for instance, water color, which is used so much at Pennsylvania's School of Architecture. There is a memory still fresh in the mind of at least one of the school's graduates of an instance wherein a student, believing that his eyesight was as good at one time as at another, neglected to label his water color pans, and came to grief. He had left the rendering of his elevation until the night before one of the monthly designs was due. Mixing his colors somewhat hurriedly he painted in a strong sky and carefully graded background, in what he took to be a beautiful blue. The next morning, however, he discovered to his great consternation that his beautiful blue sky had turned out to be a beautiful *green* sky. As he rubbed his bewildered eyes, the rest of the class gathered around (as the rest of the class always do when

any member of it "slips up"), and something like the following rapid fire verbal action ensued:

"Holy Muckelli! What struck your sky?"

"Hooray for the Irish!"

"Say, old man, that's great! Not doin' a thing!"

"Wow!"

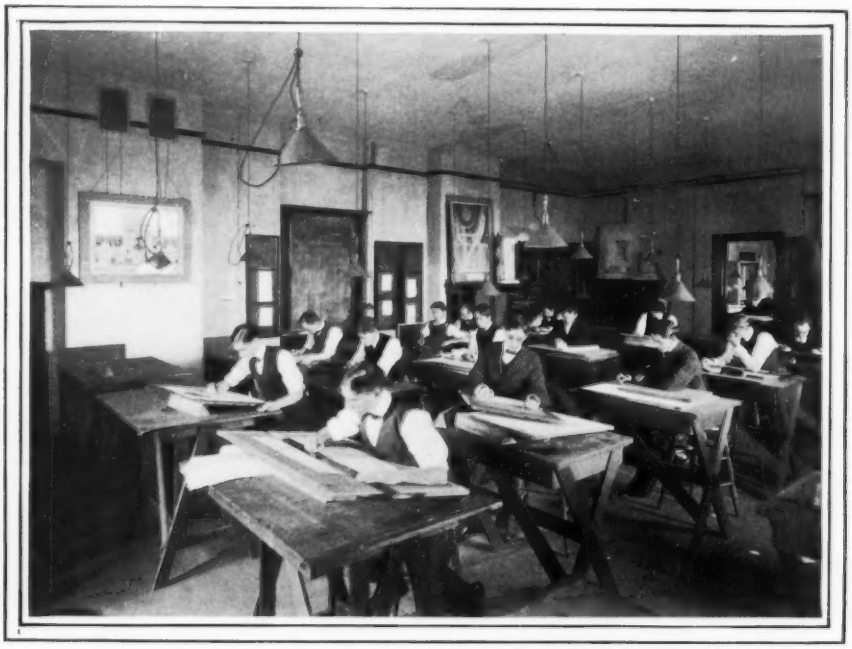
"You're all right, boy; that isn't so green as some other things around here."

"Slipped up; ha—a—rrrrd luck!"

The man who will take this sort of thing good naturedly will go through College making many friends; but woe betide him who shows anger. But notwithstanding the various difficulties which the men have in making up lost time, athletics are not entirely beyond the reach of those architectural students who stand well in their work. One of the classes in the school a few years ago boasted of a football team and also of a baseball team. Although the opportunities for practice were limited to a very few hours during the week, such as at noon time and late in the afternoon, they did not play such bad ball at that. Instances are known of men being picked from the architects for places on the class and even the 'varsity crews, and this year there is one architect on the 'varsity football scrub. The propriety of this sort of thing in a School of Architecture may be questioned by some—particularly those who have no aptitude nor taste for athletics. From their point of view, the interest which students take in athletic matters would not seem compatible with the serious, exacting business which they are in college for and which they purpose to make their life's work. It is easy to understand the theory that anything which detracts from and does not add to the chances of success in the main project, should be thrown out. But who is there wise enough to judge of these things concerning another? Who can foretell the effect in after life from a college youth's abstinence or indulgence in such proclivities, intrinsically harmless, as may tend to draw him from his studies? Bearing somewhat upon this matter, it is interesting to note that the athletic class mentioned above was a very good class. We use this word advisedly, for the class occasionally got in hot water with the Dean's office for throwing pitchers of cold water upon the heads of the lower classmen as the latter descended the dark stairways on their way home from night work in the College. In regard to the quality and quantity of work done, however, the class was unquestionably a good class. One of its members will graduate this year from the Ecole des Beaux Arts in Paris, where with other Pennsylvania men he has shared many high distinctions.

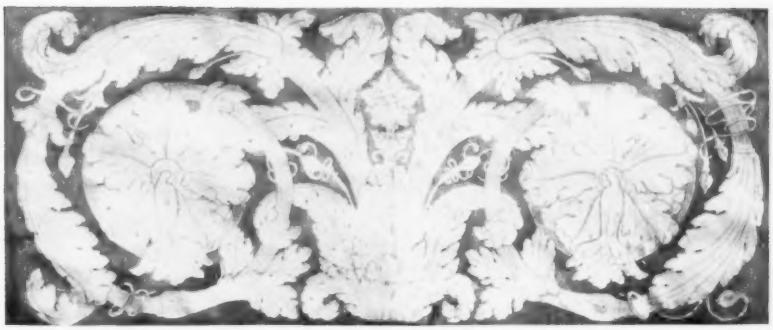
The scenes in the draughting room during the night sessions,

which this class were continually holding during their last year, were often spirited to a degree, and well illustrative of certain striking characteristics of the architectural student. For the sake of you Pennsylvania and other college men who like to be reminded of old times, and for you, gentle reader, who are not of the persuasion, let us take a brief peep through the crack of the door—not venturing inside for fear of inducing company manners. The first



FIRST YEAR SPECIAL DRAUGHTING ROOM.
School of Architecture, University of Pennsylvania

thing we notice is a suggestion of pipe smoke in the atmosphere, but if we went inside it is doubtful that we should discover any pipes, and if it were daytime, of course, there would be no smoking at all. Next there seems to be considerable noise for such a quiet kind of work as draughting. There are, perhaps, a dozen or fifteen men in the room, the majority of whom are combining music with architecture in the frankest manner imaginable. Vocal music mostly is practised (usually in harmony, but not always) and occasionally a little instrumental is thrown in by



A STUDY OF THE ACANTHUS. HISTORIC ORNAMENT.
School of Architecture, University of Pennsylvania.

way of T. square and triangle accompaniment. But still the work goes steadily on, and that every minute of it is enjoyed needs no further proof than the evidence of one's ears. And this is one characteristic of the architectural student: intense enjoyment in his work when once he has gained confidence in his ability to do that work capably. The appearances of the men are business-like in the extreme; coats are conspicuous by their absence, shirt sleeves are rolled far up, and the picturesque red and blue sweaters are much in evidence. It soon becomes evident, as we watch the men, that another strong characteristic of the architectural student is the propensity for criticising anything and everything in sight that pertains to the matter nearest his heart. We see the men circulating around singly and in groups among the various draughting tables, and whenever a halt is made, the compliments of the season are exchanged in no unmeasured terms. Mixed in with the merciless but good natured chaffing which these visits engender, there is plenty of good, wholesome criticism, all the more valuable because it is unvarnished and straight to the point. The wisdom of doing their work openly and in the draughting room is thus apparent, for besides the benefit which the men derive in architectural knowledge, the system has a corresponding virtue in counteracting any tendencies towards enlargement of the head. Such tendencies are sometimes noticeable in the case of a student who has nursed a pet design in secret. As it is, the class usually knows pretty well which are the designs most worthy of mentions, before the drawings are handed in, and nerve themselves accordingly for the jury's decisions. Furthermore this practice of criticising each other's work helps the students to criticise their own. If a man has not some ability to criticise his own work during his last year in college, there is small hope for him.

The mentions thus serve merely as recognitions of the high standards that certain works have attained, and while every man, of course, is desirous of reaching such a standard, he can have no ground for discouragement from the mere fact that his design was not awarded a mention. The system is precisely similar to that which differentiates the grades of passing examinations. Most students are happy enough if they merely pass an examination; if they pass with distinction, so much the better, and they certainly should receive a special mark of credit for it.*

Design for a Hall Clock, Interior Decoration, School of Architecture, University of Pennsylvania

Still another characteristic of the architectural student becomes apparent as we maintain our view-point by the door-crack—the habit of appropriating not only architectural ideas, but also architectural *tools* from any source that seems to promise small danger of detection. This practice of "lifting" everything from a thumb-tack to a drawer containing an entire outfit at times causes considerable embarrassment, and the sufferer's only resource usually lies in adopting the old Biblical advice: "Go thou and do likewise." The detective ability sometimes displayed by the unfortunates when upon a "still hunt" for missing articles would do credit to a Sherlock Holmes.

At two minutes before eleven o'clock the electric lights in the draughting room are extinguished for an instant. It is the engineer's signal that the power is about to be turned off. Immediately the scene changes; draughting boards are hustled off to the racks or stood on end against the walls; tools are quickly gathered up, drawers slammed and locked, coats grabbed, and in a jiffy the room is silent and dark. Then down the long, iron stairways goes the clatter of many feet, while clear and strong wells upward and reverberates through the great deserted corridors the chorus of that

*Most of the premiated work done in the School during the year is published in the Year Book of the Architectural Society. The active members of this society are chosen from the undergraduate members of the School, the instructors acting as honorary members. The Year Book is published in June, the expense of which being defrayed by advertisements. The Society holds informal monthly meetings throughout the college year, which occasions are largely social in character. Different members of the Corps of Instructors talk to the men, and various sorts of entertainment, including music and the "flowing bowl," are provided by the students. Besides the Year Book, the men have other opportunities to exhibit their work, such as at the Philadelphia T Square Club and various other exhibitions all over the country.

melody, so familiar and dear to the heart of every Pennsylvania man:

"His name was Ben
Franklin was his name.
And not unknown to fame,
The founder first, was he,
Of the Universitee."

The heavy front door swings to; the echoes die suddenly away, and the old ivy-colored stone pile has known the end of another crowded day.

Although the University of Pennsylvania's School of Architecture is barely ten years old, and its first graduates have had but half that length of time in which to make names for themselves in the world, the successes which they have already gained in various prominent architect's offices all over the United States and the gold medals which they have won in that wonderful school in Paris, tell in no uncertain way the efficiency of the methods of their preparatory training. The stories of these successes must be a source of intense gratification to Provost Harrison of the University, to the officers of the Architectural School, and particularly to Professor Laird, whose wise jurisdiction over his department and strong personal magnetism have endeared him to every student and alumnus that has known him. The University is enabled to keep thoroughly posted as to her architectural sons by means of an association formed within the past year, which society embraces every architectural alumnus of the school. The most unique and valuable feature of the association is a magazine which will be published periodically and which will give not only news of personal interest to every Pennsylvania draughtsman and architect, but also general information of architectural and building matters in almost every important business center from New York to Denver. The headquarters of the Association are divided between Philadelphia and New York, in which cities there are independent societies, or local chapters, of the main organization. The New York society at present has nearly forty men, having doubled its membership in the past two years. Smokers are held every month at the University of Pennsylvania Club's quarters, 44 West 44th street, and on Founder's Day, February 22d, the annual banquet takes place. Besides this prominent social aspect, the New York Association has devoted itself to certain definite business projects conceived for the purpose of advancing the material interests of its members, and also the welfare of the University. Considering the practical results already accomplished, the New York Architectural Alumni of the University of Pennsylvania have every reason to be proud of their society and confident of its still greater success and influence in the

future. Considered from a still larger point of view, the work that this society is doing may be taken as an indication of how the wind is blowing in architectural matters in this country. It lies with the young men of to-day, who are so auspiciously starting upon their architectural careers at the beginning of the Twentieth Century, to determine the progress that the United States shall make in architecture during that century. That the signs promise much, the most pessimistic critic will hardly deny. It is no less certain that in the fulfillment of these promises, a fair share of the credit must be accorded to the School of Architecture of the University of Pennsylvania.

Percy C. Stuart.

A CORNER OF THE QUADRANGLE.
University of Pennsylvania Dormitories.